

# **APPENDIX C: Early Coordination**



# INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue  
Room N642  
Indianapolis, Indiana 46204

**Eric J. Holcomb, Governor**  
**Joe McGuinness, Commissioner**

**Sample Early Coordination Letter sent to the agencies on March 5, May 20, and May 27, 2020, as indicated on Appendix C, page C-3.**

March 5, 2020

{See Attached List}

Re: Early Coordination  
Designation Number (Des. No.) 1700179, Roadway Reconstruction Project  
State Road (SR) 5 From United States Highway (US) 20 to School Street, 1.43 miles North (N) of US 20  
Town of Shipshewana, Newbury Township, Lagrange County, Indiana

Dear Agency

Indiana Department of Transportation (INDOT) proposes to utilize Federal Highway Administration (FHWA) funds for a portion of the costs to construct the above-referenced project. We request comments from your area of expertise regarding potential environmental impacts of this project. Please use the aforementioned Des. No. and description in your reply. We will incorporate your comments in the environmental report for this project in accordance with the National Environmental Policy Act. Your cooperation in this endeavor is appreciated.

The project extends along SR 5 from US 20 to School Street. in the Town of Shipshewana in Middlebury Township, Lagrange County, Indiana. Specifically, the project is located in Sections 10, 11, 14, and 15, Township 37 North, Range 8 East in the Shipshewana, Indiana 7.5 minute United States Geological Survey (USGS) topographic quadrangle.

SR 5 is classified as a Major Collector and the roadway cross-section provides one 11-ft.-wide travel lane and a 10-ft.-wide paved shoulder in each direction. An adjacent 10-ft.-wide paved shoulder also serves as an unofficial travel lane for horse-drawn buggy traffic.

The need for this project is due to the crash history and the presence of horse-drawn buggy traffic on this segment of SR 5. Strand Associates, Inc. (Strand) conducted an analysis of crash data collected by INDOT from 2015 through 2017. Strand calculated the Index of Crash Frequency (ICF), which measures the difference between expected and reported number of crashes. For example, an ICF of 0 indicates that a roadway is performing as expected, and an ICF of 2 indicates that the reported number of crashes exceeds the expected number of crashes by two standard deviations. SR 5 from US 20 to County Road (CR) 200 N was found to be a high-crash segment, with an Index of Crash Frequency (ICF) of 1.90, SR 5 from CR 200 N to School Street was also found to be a high-crash segment with an ICF of 2.97. This segment of SR 5 accommodates a large volume of horse-drawn buggy traffic and commercial vehicles. Through vehicles often enter the unofficial buggy lane to bypass left-turning vehicles and/or form long queues. This has resulted in high percentages of rear-end (44 percent of total) and right-angle (27 percent of total) collisions.

The purpose of this project is to reduce the crash rate on this segment of SR 5 and to provide a safe roadway for vehicles and buggies.

The preferred alternative is to apply a preventative maintenance overlay on the existing pavement while widening the roadway to provide a two-way left-turn lane along the 1.44-mile corridor. The proposed pavement section consists of one 14-foot-wide two-way left-turn lane, two 11-foot-wide through lanes, and two 10-foot-wide buggy lanes. Curb and gutter will be added along both sides of the roadway with a graded shelf to the right-of-way line to accommodate future sidewalk construction. Driveways through the project area will be reconstructed as needed. Minor drainage structures, such as pipe culverts, may be newly installed, replaced, and/or removed, as needed, to perpetuate drainage through the project area. Traffic will be maintained through the project area using lane shifts

and phased construction. Tree removal will likely be required. Greater than 0.5 acre of additional permanent and/or temporary right-of-way will be necessary.

According to the USGS National Hydrography Dataset, one stream, Cotton Lake Ditch, is located within the project area. Cotton Lake Ditch is listed on the IDEM 303(d) List of Impaired Streams due to *E. coli* and Impaired Biotic Communities. This letter serves as the request to the INDOT Ecology and Waterway Permitting Office (EWPO) to provide comments regarding the impairments. Metric Environmental will perform a waters of the US determination and again coordinate with INDOT EWPO to prepare a Waters Determination Report and, if necessary, submit the appropriate Clean Water Act permit applications.

This project likely qualifies for informal consultation for the *USFWS Interim Policy for the Review of Highway Projects in the State of Indiana* (1993) and the *USFWS Range-wide Programmatic Consultation for Indiana Bat and Northern Long-eared Bat* (2016, Rev. 2018). The appropriate submittal will be made on the USFWS Information for Planning and Consultation website.

This project appears to fall under Category B-3 of the *Programmatic Agreement Among the Federal Highway Administration (FHWA), INDOT, the Advisory Council on Historic Preservation, and the Indiana State Historic Preservation Office Regarding the Implementation of the Federal Aid Highway Program in the State of Indiana* (2006, Rev. 2018). The appropriate submittal will be made to INDOT Cultural Resources Office to fulfill the requirements of FHWA and INDOT under Section 106 of the National Historic Preservation Act.

Please review the information herein, and provide a written evaluation of any potential impacts upon resources under your jurisdiction. Please reply within 30 days of receipt of this letter or the environmental document will indicate that your agency has no comment. If you have any questions, please contact Irish L. Jones, Environmental Scientist, Metric Environmental, at 317.608.2740, Irishj@MetricEnv.com, or 6971 Hillsdale Court, Indianapolis, Indiana 46250 or Karen James, INDOT Project Manager, at 260-969-8264 or KJames1@INDOT.IN.gov. Your cooperation in expediting this process is appreciated.

Sincerely,

Metric Environmental, LLC



Irish L. Jones  
Environmental Scientist

cc: File No. 18-0046-8  
Marc Rape, PE, Strand Associates  
Karen James, Project Manager, INDOT Fort Wayne District

Attachments: Early Coordination Recipients, Location Map, USGS Topographic Map, Aerial Photograph, Natural Resources Conservation Service Soils Map and Map Legend, National Wetland Inventory Map, Federal Emergency Management Association Flood Insurance Rate Map, Photograph Location Map, Site Photographs

**Attachments removed for space conservation. See similar in Appendices B and F.**

**The following agencies received Early Coordination Letters:**

**March 5, 2020**

U.S. Fish and Wildlife Service  
Northern Indiana Suboffice  
{elizabeth\_mccloskey@fws.gov}

Federal Highway Administration  
{K.CarmanyGeorge@dot.gov}

Indiana Department of Transportation  
Office of Public Involvement  
{rclark@indot.in.gov}

United States Department of Housing and Urban  
Development  
{Paul.J.Lehmann@hud.gov}

INDOT Fort Wayne District  
{knovak@indot.in.gov}

Ecology and Waterway Permitting Office  
{akoehlinger@indot.in.gov}

National Parks Service  
Midwest Regional Office  
{Hector\_Santiago@nps.gov}

Indiana Department of Natural Resources  
Division of Fish and Wildlife  
{environmentalreview@dnr.in.gov}

Indiana Department of Environmental Management  
Proposed Roadway Construction Projects  
{http://www.in.gov/idem/5284.htm}

LaGrange County Surveyor  
Zach Holsinger  
{zholsinger@lagrangepublicworks.org}

LaGrange County Highway Department  
Ben Parish  
{bparish@lagrangepublicworks.org}

Natural Resources Conservation Service  
{Rick.Neilson@in.usda.gov}

LaGrange County Commissioners  
{tmartin@lagrangepublicworks.org}  
{lmiller@lagrangepublicworks.org}  
{dkratz@lagrangepublicworks.org}

ShipsheWana Volunteer Fire Department  
{fire@shipsheWana.org}

ShipsheWana Town Council  
{clerk@shipsheWana.org}

Indiana Geological Survey  
{https://igs.indiana.edu/eAssessment/}

ShipsheWana Campground South  
{ShipsheSouthPark@gmail.com}

Wellhead Proximity Determinator  
{www.in.gov/idem/cleanwater/pages/wellhead}

INDOT, Office of Aviation  
{JCourtade@indot.in.gov}

Army Corp of Engineers  
Detroit District  
{Paul.H.Allerding@usace.army.mil}  
{Charles.A.Uhlarik@usace.army.mil}

**May 20, 2020**

Indiana Department of Environmental Management, Groundwater  
Section  
{GWsection@idem.in.gov}

**May 27, 2020**

ShipsheWana Water Works, Wellhead Protection Coordinator  
{damon\_hunter77@yahoo.com}



# Indiana Department of Environmental Management

*We Protect Hoosiers and Our Environment.*

100 North Senate Avenue - Indianapolis, IN 46204  
(800) 451-6027 - (317) 232-8603 - [www.idem.IN.gov](http://www.idem.IN.gov)

INDOT Fort Wayne District  
Steve Seculoff  
5333 Hatfield Rd  
Fort Wayne , IN 46808  
Date

Metric Environmental  
Irish L Jones  
6971 Hillside Ct.  
Indianapolis , IN 46250

To Engineers and Consultants Proposing Roadway Construction Projects:

RE: The project extends along SR 5 from US 20 to School Street. in the Town of Shipshewana in Middlebury Township, Lagrange County, Indiana. Specifically, the project is located in Sections 10, 11, 14, and 15, Township 37 North, Range 8 East in the Shipshewana, Indiana 7.5 minute United States Geological Survey (USGS) topographic quadrangle. The purpose of this project is to reduce the crash rate on this segment of SR 5 and to provide a safe roadway for vehicles and buggies. The preferred alternative is to apply a preventative maintenance overlay on the existing pavement while widening the roadway to provide a two-way left-turn lane along the 1.44-mile corridor. The proposed pavement section consists of one 14-foot-wide two-way left-turn lane, two 11-foot-wide through lanes, and two 10-foot-wide buggy lanes. Curb and gutter will be added along both sides of the roadway with a graded shelf to the right-of-way line to accommodate future sidewalk construction. Driveways through the project area will be reconstructed as needed. Minor drainage structures, such as pipe culverts, may be newly installed, replaced, and/or removed, as needed, to perpetuate drainage through the project area. Traffic will be maintained through the project area using lane shifts and phased construction.

This letter from the Indiana Department of Environmental Management (IDEM) serves as a standardized response to enquiries inviting IDEM comments on roadway construction, reconstruction, or other improvement projects within existing roadway corridors when the proposed scope of the project is beneath the threshold requiring a formal National Environmental Policy Act-mandated Environmental Assessment or Environmental Impact Statement. As the letter attempts to address all roadway-related environmental topics of potential concern, it is possible that not every topic addressed in the letter will be applicable to your particular roadway project.

For additional information on specific roadway-related topics of interest, please visit the appropriate Web pages cited below, many of which provide contact information for persons within the various program areas who can answer questions not fully addressed in this letter. Also please be mindful that some environmental requirements may be subject to change and so each person intending to include a copy of this letter in their project documentation packet is advised to download the most recently revised version of the letter; found at: <http://www.in.gov/idem/5283.htm> (<http://www.in.gov/idem/5283.htm>).

To ensure that all environmentally-related issues are adequately addressed, IDEM recommends that you read this letter in its entirety, and consider each of the following issues as you move forward with the planning of your proposed roadway construction, reconstruction, or improvement project:

## WATER AND BIOTIC QUALITY

1. Section 404 of the Clean Water Act requires that you obtain a permit from the U.S. Army Corps of Engineers (USACE) before discharging dredged or fill materials into any wetlands or other waters, such as rivers, lakes, streams, and ditches. Other activities regulated include the relocation, channelization, widening, or other such alteration of a stream, and the mechanical clearing (use of heavy construction equipment) of wetlands. Thus, as a project owner or sponsor, it is your responsibility to ensure that no wetlands are disturbed without the proper permit. Although you may initially refer to the U.S. Fish and Wildlife Service National Wetland Inventory maps as a means of identifying potential areas of concern, please be mindful that those maps do not depict jurisdictional wetlands regulated by the USACE or the Department of Environmental Management. A valid jurisdictional wetlands determination can only be made by the USACE, using the 1987 Wetland Delineation Manual.

USACE recommends that you have a consultant check to determine whether your project will abut, or lie within, a wetland area. To view a list of consultants that have requested to be included on a list posted by the USACE on their Web site, see USACE Permits and Public Notices (<http://www.lrl.usace.army.mil/orf/default.asp>) (<http://www.lrl.usace.army.mil/orf/default.asp>) and then click on "Information" from the menu on the right-hand side of that page. Their "Consultant List" is the fourth entry down on the "Information" page. Please note that the USACE posts all consultants that request to appear on the list, and that inclusion of any particular consultant on the list does not represent an endorsement of that consultant by the USACE, or by IDEM.

Much of northern Indiana (Newton, Lake, Porter, LaPorte, St. Joseph, Elkhart, LaGrange, Steuben, and Dekalb counties; large portions of Jasper, Starke, Marshall, Noble, Allen, and Adams counties; and lesser portions of Benton, White, Pulaski, Kosciusko, and Wells counties) is served by the USACE District Office in Detroit (313-226-6812). The central and southern portions of the state (large portions of Benton, White, Pulaski, Kosciusko, and Wells counties; smaller portions of Jasper, Starke, Marshall, Noble, Allen, and Adams counties; and all other Indiana counties located in north-central, central, and southern Indiana ) are served by the USACE Louisville District Office (502-315-6733).

Additional information on contacting these U.S. Army Corps of Engineers (USACE) District Offices, government agencies with jurisdiction over wetlands, and other water quality issues, can be found at <http://www.in.gov/idem/4396.htm> (<http://www.in.gov/idem/4396.htm>). IDEM recommends that impacts to wetlands and other water resources be avoided to the fullest extent.

2. In the event a Section 404 wetlands permit is required from the USACE, you also must obtain a Section 401 Water Quality Certification from the IDEM Office of Water Quality Wetlands Program. To learn more about the Wetlands Program, visit: <http://www.in.gov/idem/4384.htm> (<http://www.in.gov/idem/4384.htm>).
3. If the USACE determines that a wetland or other water body is isolated and not subject to Clean Water Act regulation, it is still regulated by the state of Indiana . A State Isolated Wetland permit from IDEM's Office of Water Quality (OWQ) is required for any activity that results in the discharge of dredged or fill materials into isolated wetlands. To learn more about isolated wetlands, contact the OWQ Wetlands Program at 317-233-8488.
4. If your project will involve over a 0.5 acre of wetland impact, stream relocation, or other large-scale alterations to water bodies such as the creation of a dam or a water diversion, you should seek additional input from the OWQ Wetlands Program staff. Consult the Web at: <http://www.in.gov/idem/4384.htm> (<http://www.in.gov/idem/4384.htm>) for the appropriate staff contact to further discuss your project.
5. Work within the one-hundred year floodway of a given water body is regulated by the Department of Natural Resources, Division of Water. The Division issues permits for activities regulated under the follow statutes:

- IC 14-26-2 Lakes Preservation Act 312 IAC 11
- IC 14-26-5 Lowering of Ten Acre Lakes Act No related code
- IC 14-28-1 Flood Control Act 310 IAC 6-1
- IC 14-29-1 Navigable Waterways Act 312 IAC 6
- IC 14-29-3 Sand and Gravel Permits Act 312 IAC 6
- IC 14-29-4 Construction of Channels Act No related code

For information on these Indiana (statutory) Code and Indiana Administrative Code citations, see the DNR Web site at: <http://www.in.gov/dnr/water/9451.htm> (<http://www.in.gov/dnr/water/9451.htm>) . Contact the DNR Division of Water at 317-232-4160 for further information.

The physical disturbance of the stream and riparian vegetation, especially large trees overhanging any affected water bodies should be limited to only that which is absolutely necessary to complete the project. The shade provided by the large overhanging trees helps maintain proper stream temperatures and dissolved oxygen for aquatic life.

6. For projects involving construction activity (which includes clearing, grading, excavation and other land disturbing activities) that result in the disturbance of one (1), or more, acres of total land area, contact the Office of Water Quality – Watershed Planning Branch (317/233-1864) regarding the need for of a Rule 5 Storm Water Runoff Permit. Visit the following Web page
  - <http://www.in.gov/idem/4902.htm> (<http://www.in.gov/idem/4902.htm>)

To obtain, and operate under, a Rule 5 permit you will first need to develop a Construction Plan (<http://www.in.gov/idem/4917.htm#constreq> (<http://www.in.gov/idem/4917.htm#constreq>)), and as described in 327 IAC 15-5-6.5 (<http://www.in.gov/legislative/iac/T03270/A00150> [PDF] (<http://www.in.gov/legislative/iac/T03270/A00150.PDF>), pages 16 through 19). Before you may apply for a Rule 5 Permit, or begin construction, you must submit your Construction Plan to your county Soil and Water Conservation District (SWCD) (<http://www.in.gov/isda/soil/contacts/map.html> (<http://www.in.gov/isda/soil/contacts/map.html>)).

Upon receipt of the construction plan, personnel of the SWCD or the Indiana Department of Environmental Management will review the plan to determine if it meets the requirements of 327 IAC 15-5. Plans that are deemed deficient will require re-submittal. If the plan is sufficient you will be notified and instructed to submit the verification to IDEM as part of the Rule 5 Notice of Intent (NOI) submittal. Once construction begins, staff of the SWCD or Indiana Department of Environmental Management will perform inspections of activities at the site for compliance with the regulation.

Please be mindful that approximately 149 Municipal Separate Storm Sewer System (MS4) areas are now being established by various local governmental entities throughout the state as part of the implementation of Phase II federal storm water requirements. All of these MS4 areas will eventually take responsibility for Construction Plan review, inspection, and enforcement. As these MS4 areas obtain program approval from IDEM, they will be added to a list of MS4 areas posted on the IDEM Website at: <http://www.in.gov/idem/4900.htm> (<http://www.in.gov/idem/4900.htm>).

If your project is located in an IDEM-approved MS4 area, please contact the local MS4 program about meeting their storm water requirements. Once the MS4 approves the plan, the NOI can be submitted to IDEM.

Regardless of the size of your project, or which agency you work with to meet storm water requirements, IDEM recommends that appropriate structures and techniques be utilized both during the construction phase, and after completion of the project, to minimize the impacts associated with storm water runoff. The

use of appropriate planning and site development and appropriate storm water quality measures are recommended to prevent soil from leaving the construction site during active land disturbance and for post construction water quality concerns. Information and assistance regarding storm water related to construction activities are available from the Soil and Water Conservation District (SWCD) offices in each county or from IDEM.

7. For projects involving impacts to fish and botanical resources, contact the Department of Natural Resources - Division of Fish and Wildlife (317/232-4080) for addition project input.
8. For projects involving water main construction, water main extensions, and new public water supplies, contact the Office of Water Quality - Drinking Water Branch (317-308-3299) regarding the need for permits.
9. For projects involving effluent discharges to waters of the State of Indiana , contact the Office of Water Quality - Permits Branch (317-233-0468) regarding the need for a National Pollutant Discharge Elimination System (NPDES) permit.
10. For projects involving the construction of wastewater facilities and sewer lines, contact the Office of Water Quality - Permits Branch (317-232-8675) regarding the need for permits.

## AIR QUALITY

The above-noted project should be designed to minimize any impact on ambient air quality in, or near, the project area. The project must comply with all federal and state air pollution regulations. Consideration should be given to the following:

1. Regarding open burning, and disposing of organic debris generated by land clearing activities; some types of open burning are allowed (<http://www.in.gov/idem/4148.htm>) under specific conditions. You also can seek an open burning variance from IDEM.

However, IDEM generally recommends that you take vegetative wastes to a registered yard waste composting facility or that the waste be chipped or shredded with composting on site (you must register with IDEM if more than 2,000 pounds is to be composted; contact 317/232-0066). The finished compost can then be used as a mulch or soil amendment. You also may bury any vegetative wastes (such as leaves, twigs, branches, limbs, tree trunks and stumps) onsite, although burying large quantities of such material can lead to subsidence problems, later on.

Reasonable precautions must be taken to minimize fugitive dust emissions from construction and demolition activities. For example, wetting the area with water, constructing wind barriers, or treating dusty areas with chemical stabilizers (such as calcium chloride or several other commercial products). Dirt tracked onto paved roads from unpaved areas should be minimized.

Additionally, if construction or demolition is conducted in a wooded area where blackbirds have roosted or abandoned buildings or building sections in which pigeons or bats have roosted for 3-5 years precautionary measures should be taken to avoid an outbreak of histoplasmosis. This disease is caused by the fungus *Histoplasma capsulatum*, which stems from bird or bat droppings that have accumulated in one area for 3-5 years. The spores from this fungus become airborne when the area is disturbed and can cause infections over an entire community downwind of the site. The area should be wetted down prior to cleanup or demolition of the project site. For more detailed information on histoplasmosis prevention and control, please contact the Acute Disease Control Division of the Indiana State Department of Health at (317) 233-7272.

2. The U.S. EPA and the Surgeon General recommend that people not have long-term exposure to radon at levels above 4 pCi/L. (For a county-by-county map of predicted radon levels in Indiana, visit: <http://www.in.gov/idem/4145.htm> (<http://www.in.gov/idem/4145.htm>).)

The U.S. EPA further recommends that all homes (and apartments within three stories of ground level) be tested for radon. If in-home radon levels are determined to be 4 pCi/L, or higher, EPA recommends a follow-up test. If the second test confirms that radon levels are 4 pCi/L, or higher, EPA recommends the installation of radon-reduction measures. (For a list of qualified radon testers and radon mitigation (or reduction) specialists visit: [http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon\\_testers\\_mitigators\\_list.pdf](http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf) ([http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon\\_testers\\_mitigators\\_list.pdf](http://www.in.gov/isdh/regsvcs/radhealth/pdfs/radon_testers_mitigators_list.pdf))). It also is recommended that radon reduction measures be built into all new homes, particularly in areas like Indiana that have moderate to high predicted radon levels.

To learn more about radon, radon risks, and ways to reduce exposure visit:

<http://www.in.gov/isdh/regsvcs/radhealth/radon.htm> (<http://www.in.gov/isdh/regsvcs/radhealth/radon.htm>), <http://www.in.gov/idem/4145.htm> (<http://www.in.gov/idem/4145.htm>), or <http://www.epa.gov/radon/index.html> (<http://www.epa.gov/radon/index.html>).

3. With respect to asbestos removal: all facilities slated for renovation or demolition (except residential buildings that have (4) four or fewer dwelling units and which will not be used for commercial purposes) must be inspected by an Indiana-licensed asbestos inspector prior to the commencement of any renovation or demolition activities. If regulated asbestos-containing material (RACM) that may become airborne is found, any subsequent demolition, renovation, or asbestos removal activities must be performed in accordance with the proper notification and emission control requirements.

If no asbestos is found where a renovation activity will occur, or if the renovation involves removal of less than 260 linear feet of RACM off of pipes, less than 160 square feet of RACM off of other facility components, or less than 35 cubic feet of RACM off of all facility components, the owner or operator of the project does not need to notify IDEM before beginning the renovation activity.

For questions on asbestos demolition and renovation activities, you can also call IDEM's Lead/Asbestos section at 1-888-574-8150.

However, in all cases where a demolition activity will occur (even if no asbestos is found), the owner or operator must still notify IDEM 10 working days prior to the demolition, using the form found at <http://www.in.gov/icpr/webfile/formsdiv/44593.pdf> (<http://www.in.gov/icpr/webfile/formsdiv/44593.pdf>).

Anyone submitting a renovation/demolition notification form will be billed a notification fee based upon the amount of friable asbestos containing material to be removed or demolished. Projects that involve the removal of more than 2,600 linear feet of friable asbestos containing materials on pipes, or 1,600 square feet or 400 cubic feet of friable asbestos containing material on other facility components, will be billed a fee of \$150 per project; projects below these amounts will be billed a fee of \$50 per project. All notification remitters will be billed on a quarterly basis.

For more information about IDEM policy regarding asbestos removal and disposal, visit:

<http://www.in.gov/idem/4983.htm> (<http://www.in.gov/idem/4983.htm>).

4. With respect to lead-based paint removal: IDEM encourages all efforts to minimize human exposure to lead-based paint chips and dust. IDEM is particularly concerned that young children exposed to lead can suffer from learning disabilities. Although lead-based paint abatement efforts are not mandatory, any abatement that is conducted within housing built before January 1, 1978, or a child-occupied facility is required to

comply with all lead-based paint work practice standards, licensing and notification requirements. For more information about lead-based paint removal visit: <http://www.in.gov/isdh/19131.htm> (<http://www.in.gov/isdh/19131.htm>).

5. Ensure that asphalt paving plants are permitted and operate properly. The use of cutback asphalt, or asphalt emulsion containing more than seven percent (7%) oil distillate, is prohibited during the months April through October. See 326 IAC 8-5-2 , Asphalt Paving Rule (<http://www.ai.org/legislative/iac/T03260/A00080.PDF> (<http://www.ai.org/legislative/iac/T03260/A00080.PDF>)).
6. If your project involves the construction of a new source of air emissions or the modification of an existing source of air emissions or air pollution control equipment, it will need to be reviewed by the IDEM Office of Air Quality (OAQ). A registration or permit may be required under 326 IAC 2 (View at: [www.ai.org/legislative/iac/t03260/a00020.pdf](http://www.ai.org/legislative/iac/t03260/a00020.pdf) (<http://www.ai.org/legislative/iac/t03260/a00020.pdf>.) New sources that use or emit hazardous air pollutants may be subject to Section 112 of the Clean Air Act and corresponding state air regulations governing hazardous air pollutants.
7. For more information on air permits visit: <http://www.in.gov/idem/4223.htm> (<http://www.in.gov/idem/4223.htm>), or to initiate the IDEM air permitting process, please contact the Office of Air Quality Permit Reviewer of the Day at (317) 233-0178 or OAMPROD atdem.state.in.us.

## LAND QUALITY

In order to maintain compliance with all applicable laws regarding contamination and/or proper waste disposal, IDEM recommends that:

1. If the site is found to contain any areas used to dispose of solid or hazardous waste, you need to contact the Office of Land Quality (OLQ) at 317-308-3103.
2. All solid wastes generated by the project, or removed from the project site, need to be taken to a properly permitted solid waste processing or disposal facility. For more information, visit <http://www.in.gov/idem/4998.htm> (<http://www.in.gov/idem/4998.htm>).
3. If any contaminated soils are discovered during this project, they may be subject to disposal as hazardous waste. Please contact the OLQ at 317-308-3103 to obtain information on proper disposal procedures.
4. If PCBs are found at this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding management of any PCB wastes from this site.
5. If there are any asbestos disposal issues related to this site, please contact the Industrial Waste Section of OLQ at 317-308-3103 for information regarding the management of asbestos wastes (Asbestos removal is addressed above, under Air Quality).
6. If the project involves the installation or removal of an underground storage tank, or involves contamination from an underground storage tank, you must contact the IDEM Underground Storage Tank program at 317/308-3039. See: <http://www.in.gov/idem/4999.htm> (<http://www.in.gov/idem/4999.htm>).

## FINAL REMARKS

Should you need to obtain any environmental permits in association with this proposed project, please be mindful that IC 13-15-8 requires that you notify all adjoining property owners and/or occupants within ten days your submittal of each permit application. However, if you are seeking multiple permits, you can still meet the

notification requirement with a single notice if all required permit applications are submitted with the same ten day period.

Should the scope of the proposed project be expanded to the extent that a National Environmental Policy Act Environmental Assessment (EA) or Environmental Impact Statement (EIS) is required, IDEM will actively participate in any early interagency coordination review of the project.

Meanwhile, please note that this letter does not constitute a permit, license, endorsement or any other form of approval on the part of the Indiana Department of Environmental Management regarding any project for which a copy of this letter is used. Also note that it is the responsibility of the project engineer or consultant using this letter to ensure that the most current draft of this document, which is located at <http://www.in.gov/idem/5284.htm> (<http://www.in.gov/idem/5284.htm>), is used.

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## Signature(s) of the Applicant

I acknowledge that the following proposed roadway project will be financed in part, or in whole, by public monies.

### Project Description

The project extends along SR 5 from US 20 to School Street. in the Town of Shipshewana in Middlebury Township, Lagrange County, Indiana. Specifically, the project is located in Sections 10, 11, 14, and 15, Township 37 North, Range 8 East in the Shipshewana, Indiana 7.5 minute United States Geological Survey (USGS) topographic quadrangle. The purpose of this project is to reduce the crash rate on this segment of SR 5 and to provide a safe roadway for vehicles and buggies. The preferred alternative is to apply a preventative maintenance overlay on the existing pavement while widening the roadway to provide a two-way left-turn lane along the 1.44-mile corridor. The proposed pavement section consists of one 14-foot-wide two-way left-turn lane, two 11-foot-wide through lanes, and two 10-foot-wide buggy lanes. Curb and gutter will be added along both sides of the roadway with a graded shelf to the right-of-way line to accommodate future sidewalk construction. Driveways through the project area will be reconstructed as needed. Minor drainage structures, such as pipe culverts, may be newly installed, replaced, and/or removed, as needed, to perpetuate drainage through the project area. Traffic will be maintained through the project area using lane shifts and phased construction.

With my signature, I do hereby affirm that I have read the letter from the Indiana Department of Environment that appears directly above. In addition, I understand that in order to complete that project in which I am interested, with a minimum of impact to the environment, I must consider all the issues addressed in the aforementioned letter, and further, that I must obtain any required permits.

Date: 5/14/2020

Signature of the INDOT  
Project Engineer or Other Responsible Agent 

Steve Seculoff

Date: 3/5/20

Signature of the  
For Hire Consultant 

Irish L Jones

## Organization and Project Information

**Project ID:**  
**Des. ID:** 1700179  
**Project Title:** Auxiliary Lanes/Two Way Left Turn Lane  
**Name of Organization:** Metric Environmental  
**Requested by:** Jessica Peterson

## Environmental Assessment Report

1. Geological Hazards:
  - Moderate liquefaction potential
2. Mineral Resources:
  - Bedrock Resource: Low Potential
  - Sand and Gravel Resource: High Potential
3. Active or abandoned mineral resources extraction sites:
  - None documented in the area

\*All map layers from Indiana Map ([maps.indiana.edu](http://maps.indiana.edu))

### **DISCLAIMER:**

This document was compiled by Indiana University, Indiana Geological Survey, using data believed to be accurate; however, a degree of error is inherent in all data. This product is distributed "AS-IS" without warranties of any kind, either expressed or implied, including but not limited to warranties of suitability to a particular purpose or use. No attempt has been made in either the design or production of these data and document to define the limits or jurisdiction of any federal, state, or local government. The data used to assemble this document are intended for use only at the published scale of the source data or smaller (see the metadata links below) and are for reference purposes only. They are not to be construed as a legal document or survey instrument. A detailed on-the-ground survey and historical analysis of a single site may differ from these data and this document.

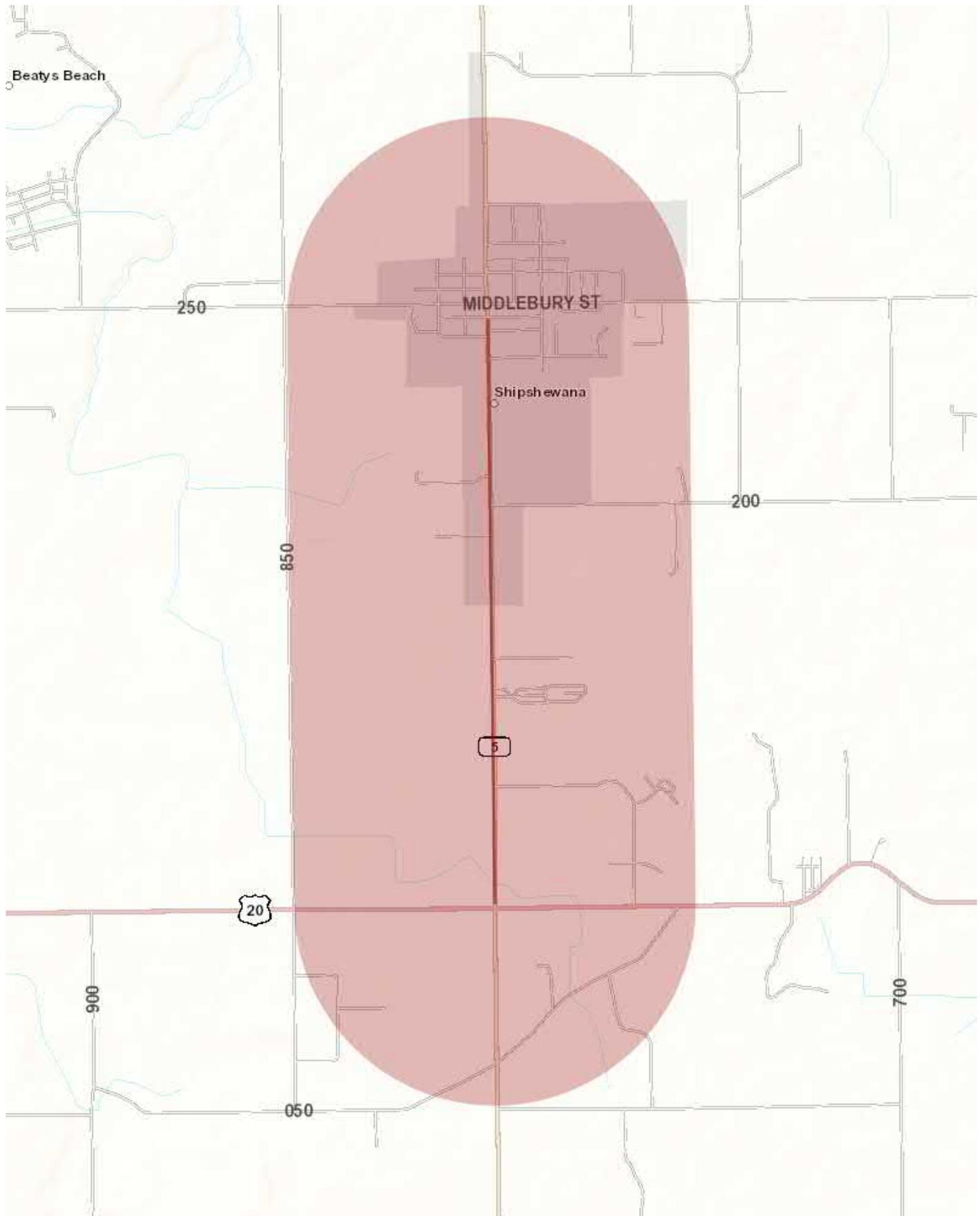
This information was furnished by Indiana Geological Survey

Address: 420 N. Walnut St., Bloomington, IN 47404

Email: IGSEnvir@indiana.edu

Phone: 812 855-7428

Date: March 5, 2020



## Irish Jones

---

**From:** Courtade, Julian <JCourtade@indot.IN.gov>  
**Sent:** Monday, March 09, 2020 8:15 AM  
**To:** Irish Jones  
**Subject:** RE: Early Coordination Des. No. 1700179 Roadway Reconstruction Project LaGrange County, IN

Irish –

I reviewed the Early Coordination Letter and found no issues with surrounding airspace or airports. This is due to the project meeting the required glideslope requirements to the nearest public-use facility. Please let me know if you have any questions!

Thanks,

**Julian L. Courtade**

Chief Airport Inspector  
INDOT, Office of Aviation  
IGCN Room N955  
100 North Senate Avenue  
Indianapolis, IN 46204

**Office:** (317) 232-1477

**Email:** [jcourtade@indot.in.gov](mailto:jcourtade@indot.in.gov)



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**From:** Irish Jones <[irishj@metricenv.com](mailto:irishj@metricenv.com)>  
**Sent:** Thursday, March 5, 2020 3:27 PM  
**To:** Courtade, Julian <[JCourtade@indot.IN.gov](mailto:JCourtade@indot.IN.gov)>  
**Subject:** Early Coordination Des. No. 1700179 Roadway Reconstruction Project LaGrange County, IN

**\*\*\*\* This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. \*\*\*\***

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Hello,

Metric Environmental has been contracted by Strand Associates to prepare the Categorical Exclusion Environmental Document for the above referenced Roadway Reconstruction Project.

We respectfully request your review of the attached early coordination packet and response within 30 days.

Thank you,

March 17, 2020

Irish L. Jones  
Metric Environmental  
6971 Hillsdale Court  
Indianapolis, Indiana 46250

Dear Mr. Jones:

The proposed project to reconstruct the roadway along State Road 5 from US 20 to School Street in the Town of Shipshewana, Newbury Township, Lagrange County, Indiana (Des No 1700179), as referred to in your letter received March 5, 2020, will cause a conversion of prime farmland.

The attached packet of information is for your use competing Parts VI and VII of the AD-1006. After completion, the federal funding agency needs to forward one copy to NRCS for our records.

If you need additional information, please contact John Allen at 317-295-5859.

Sincerely,

**RICHARD  
NEILSON**

Digitally signed by  
RICHARD NEILSON  
Date: 2020.03.20  
06:52:06 -04'00'

Acting For

JERRY RAYNOR  
State Conservationist

Enclosures



**FARMLAND CONVERSION IMPACT RATING**

<b>PART I</b> (To be completed by Federal Agency)		Date Of Land Evaluation Request			
Name of Project <b>DES1700179 SR5 Road Improvement</b>		Federal Agency Involved <b>FHWA</b>			
Proposed Land Use <b>Transportation</b>		County and State <b>LaGrange County, Indiana</b>			
<b>PART II</b> (To be completed by NRCS)		Date Request Received By NRCS <b>3/5/2020</b>		Person Completing Form: <b>JRA</b>	
Does the site contain Prime, Unique, Statewide or Local Important Farmland? <i>(If no, the FPPA does not apply - do not complete additional parts of this form)</i>		YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		Acres Irrigated	
				Average Farm Size <b>91 ac</b>	
Major Crop(s) <b>Corn</b>		Farmable Land In Govt. Jurisdiction Acres: <b>210989 % 85</b>		Amount of Farmland As Defined in FPPA Acres: <b>115214 % 47</b>	
Name of Land Evaluation System Used <b>LESA</b>		Name of State or Local Site Assessment System		Date Land Evaluation Returned by NRCS <b>3/17/2020</b>	
<b>PART III</b> (To be completed by Federal Agency)		Alternative Site Rating			
		Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly		<b>0.06</b>			
B. Total Acres To Be Converted Indirectly					
C. Total Acres In Site		<b>0.06</b>			
<b>PART IV</b> (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland		<b>0.23</b>			
B. Total Acres Statewide Important or Local Important Farmland		<b>0.00</b>			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted		<b>&lt;0.001</b>			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value		<b>35</b>			
<b>PART V</b> (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)		<b>77</b>			
<b>PART VI</b> (To be completed by Federal Agency) Site Assessment Criteria <i>(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)</i>		<b>Maximum Points</b>	Site A	Site B	Site C
1. Area In Non-urban Use		(15)	<b>3</b>		
2. Perimeter In Non-urban Use		(10)	<b>2</b>		
3. Percent Of Site Being Farmed		(20)	<b>10</b>		
4. Protection Provided By State and Local Government		(20)	<b>10</b>		
5. Distance From Urban Built-up Area		(15)	<b>1</b>		
6. Distance To Urban Support Services		(15)	<b>15</b>		
7. Size Of Present Farm Unit Compared To Average		(10)	<b>5</b>		
8. Creation Of Non-farmable Farmland		(10)	<b>0</b>		
9. Availability Of Farm Support Services		(5)	<b>3</b>		
10. On-Farm Investments		(20)	<b>12</b>		
11. Effects Of Conversion On Farm Support Services		(10)	<b>0</b>		
12. Compatibility With Existing Agricultural Use		(10)	<b>2</b>		
TOTAL SITE ASSESSMENT POINTS		<b>160</b>	<b>63</b>	<b>0</b>	<b>0</b>
<b>PART VII</b> (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)		100	<b>77</b>	<b>0</b>	<b>0</b>
Total Site Assessment (From Part VI above or local site assessment)		160	<b>63</b>	<b>0</b>	<b>0</b>
<b>TOTAL POINTS (Total of above 2 lines)</b>		<b>260</b>	<b>140</b>	<b>0</b>	<b>0</b>
Site Selected: <b>A</b>		Date Of Selection <b>3/20/20</b>		Was A Local Site Assessment Used?	
				YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	
Reason For Selection:  <b>The purpose of this project is to reduce the crash rate on this segment of SR 5 to provide a safe roadway for motorized vehicles and buggies.</b>					
Name of Federal agency representative completing this form: <b>Jessica Peterson, MS on behalf of INDOT</b>				Date: <b>3/20/20</b>	

(See Instructions on reverse side)

**State of Indiana**  
**DEPARTMENT OF NATURAL RESOURCES**  
**Division of Fish and Wildlife**  
**Early Coordination/Environmental Assessment**

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**DNR #:** ER-22300

**Request Received:** March 5, 2020

**Requestor:** Metric Environmental  
Irish L Jones  
6971 Hillsdale Court  
Indianapolis, IN 46250

**Project:** SR 5 roadway reconstruction from US 20 to School Street, Shipshewana; Des #1700179

**County/Site info:** LaGrange

The Indiana Department of Natural Resources has reviewed the above referenced project per your request. Our agency offers the following comments for your information and in accordance with the National Environmental Policy Act of 1969.

If our agency has regulatory jurisdiction over the project, the recommendations contained in this letter may become requirements of any permit issued. If we do not have permitting authority, all recommendations are voluntary.

**Regulatory Assessment:** Formal approval by the Department of Natural Resources under the regulatory programs administered by the Division of Water is not required for this project.

**Natural Heritage Database:** The Natural Heritage Program's data have been checked. The American Badger (*Taxidea taxus*), a state species of special concern, has been documented within the project area.

**Fish & Wildlife Comments:** Badgers are a wide ranging species that prefer an open, prairie-type habitat, with Indiana being at the eastern edge of their natural range. The range of the badger continues to expand as a result of land-use changes from forest to farmland and open pastureland. Impacts to the American badger or its preferred habitat are unlikely as a result of this project.

The measures below should be implemented to avoid, minimize, or compensate for impacts to fish, wildlife, and botanical resources:

1. Revegetate all bare and disturbed areas within the project area using a mixture of grasses (excluding all varieties of tall fescue), sedges, and wildflowers native to Northern Indiana and specifically for stream bank/floodway stabilization purposes as soon as possible upon completion.
2. Minimize and contain within the project limits inchannel disturbance and the clearing of trees and brush.
3. Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife.
4. Do not cut any trees suitable for Indiana bat or Northern Long-eared bat roosting (greater than 5 inches dbh, living or dead, with loose hanging bark, or with cracks, crevices, or cavities) from April 1 through September 30.
5. Do not excavate in the low flow area except for the placement of piers, foundations, and riprap, or removal of the old structure.
6. Do not deposit or allow demolition/construction materials or debris to fall or otherwise enter the waterway.
7. Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the stream or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.
8. Seed and protect all disturbed streambanks and slopes not protected by other

**THIS IS NOT A PERMIT**

**State of Indiana**  
**DEPARTMENT OF NATURAL RESOURCES**  
**Division of Fish and Wildlife**  
**Early Coordination/Environmental Assessment**

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methods that are 3:1 or steeper with erosion control blankets that are heavy-duty, biodegradable, and net free or that use loose-woven / Leno-woven netting to minimize the entrapment and snaring of small-bodied wildlife such as snakes and turtles (follow manufacturer's recommendations for selection and installation); seed and apply mulch on all other disturbed areas.

9. Plant five trees, at least 2 inches in diameter-at-breast height, for each tree which is removed that is ten inches or greater in diameter-at-breast height.

10. Do not excavate or place fill in any riparian wetland.

**Contact Staff:**

Christie L. Stanifer, Environ. Coordinator, Fish & Wildlife

Our agency appreciates this opportunity to be of service. Please contact the above staff member at (317) 232-4080 if we can be of further assistance.

*Christie L. Stanifer*

---

**Date:** April 1, 2020

Christie L. Stanifer  
Environ. Coordinator  
Division of Fish and Wildlife



**DEPARTMENT OF THE ARMY**  
**U. S. ARMY CORPS OF ENGINEERS, DETROIT DISTRICT**  
**477 MICHIGAN AVE.**  
**DETROIT, MICHIGAN 48226-2550**

April 6, 2020

Irish Jones  
Metric Environmental, LLC  
c/o Indiana Department of Transportation  
100 North Senate Avenue, Room N642  
Indianapolis, IN 46204

Dear Mr. Jones:

This is in response to your March 5, 2020, letter requesting comments on a proposed roadway reconstruction project for State Road (SR) 5, extending north from United States (US) Highway 20 approximately 1.43 miles to School Street in the Town of Shipshewana, in Lagrange County, Indiana (Des. No. 1700179). The preferred alternative is to apply a preventive maintenance overlay on the existing pavement while widening the roadway to provide separate through, turn, and buggy lanes. Curbs and gutters will be added along with a graded shelf for future sidewalk construction. Minor drainage structures, such as pipe culverts, may be installed, replaced, and/or removed, as needed. Affected driveways would be repaved and some trees may be removed. The following information is provided in accordance with our responsibilities under our Regulatory and Civil Works Programs.

Your project may require a Department of the Army Permit, pursuant to Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act of 1899. Any of the proposed work that occurs within a water of the United States or adjacent wetlands, will likely require prior authorization through our regulatory permit process. For further information on permit requirements and the application process, please contact the Michiana Branch, Regulatory Office, South Bend, Indiana, at 574-232-1952.

There are no current plans under our Civil Works Program to develop waterways in the vicinity of your project; nor do we have any current or proposed flood risk management studies for the area described in your letter.

The project site is designated an area of minimal flood hazard under the National Flood Insurance Program. A small drainage, Cotton Lake Ditch, passes under SR 5 a few hundred feet north of US 20. We recommend that you coordinate with local officials and with the Indiana Department of Natural Resources regarding the applicability of a floodplain permit prior to construction. This coordination would help ensure compliance with local and state floodplain management regulations and acts, such as the Indiana Flood Control Act (IC 13-2-22). If you obtain information that any part of your project

would impact the floodplain, you should consider other alternatives that, to the extent possible, avoid or minimize adverse impacts associated with use of the floodplain.

We appreciate the opportunity to comment on the proposed roadway reconstruction project for SR 5, extending north from US 20 approximately 1.43 miles to School Street in the Town of Shipshewana, in Lagrange County, Indiana. Questions regarding our regulatory program should be directed to Mr. Don Reinke, Regulatory Office, at 313-226-6812. Any other questions may be directed to Mr. Paul Allarding of my staff at 313-226-7590 or me at 313-226-2476.

Sincerely,

UHLARIK.CHARL  
ES.A.1230382715

Digitally signed by  
UHLARIK.CHARLES.A.123038271  
5  
Date: 2020.04.06 15:18:34 -04'00'

Charles A. Uhlarik  
Chief, Environmental Analysis Branch

Copies furnished:

Don Reinke, Corps, Regulatory Office, Detroit  
Mary Weidel, Corps, Floodplain Management Services, Detroit



# Indiana Department of Environmental Management

*We Protect Hoosiers and Our Environment.*

100 N. Senate Avenue • Indianapolis, IN 46204

(800) 451-6027 • (317) 232-8603 • [www.idem.IN.gov](http://www.idem.IN.gov)

Eric J. Holcomb  
Governor

Bruno Pigott  
Commissioner

May 26, 2020

66-33  
Metric Environmental  
Attention: Jessica Peterson  
6971 Hillside Court  
Indianapolis, Indiana 46250

Dear Jessica Peterson,

RE: Wellhead Protection Area  
Proximity Determination  
Des No 1700179  
INDOT  
Road Project in Fort Wayne  
District, Shipshewana,  
LaGrange County, Indiana

Upon review of the above referenced project site, it has been determined that the proposed project area **is located within** a Wellhead Protection Area. If the contact information is needed for the WHPA, please contact the reference located at the bottom of the letter for the appropriate information. The information is accurate to the best of our knowledge; however, there are in some cases a few factors that could impact the accuracy of this determination. Some Wellhead Protection Area Delineations have not been submitted, and many have not been approved by this office. In these cases we use a 3,000 foot fixed radius buffer to make the proximity determination. To find the status of a Public Water Supply System's (PWSS's) Wellhead Protection Area Delineation please visit our tracking database at <http://www.in.gov/idem/cleanwater/2456.htm> and scroll to the bottom of the page.

The project area **is not located within** a Source Water Assessment Area for a PWSS's surface water intake. The Source Water Assessment Area relates to the surface water drainage area that water could potentially flow and influence water quality for a PWSS's source of drinking water.

Note: the Drinking Water Branch has a self service feature which allows one to determine wellhead proximity without submitting the application form. Use the following instructions:

1. Go to <http://idemmaps.idem.in.gov/whpa2/>
2. Use the search tool located in the upper left hand corner of the application to zoom to your site of interest by way of city, county, or address; or use the mouse to click on the site of interest displayed on the map.
3. Once the site of interest has been located and selected, use the print tool to create a .pdf of a wellhead protection area proximity determination response.

In the future please consider using this self service feature if it suits your needs.

If you have any additional questions please feel free to contact me at the address above or at (317) 233-9158 and [aturnbow@idem.in.gov](mailto:aturnbow@idem.in.gov).

Sincerely,

Alisha Turnbow, Environmental  
Manager, Ground Water Section, Drinking Water  
Branch, Office of Water Quality



## APPENDIX D: Bridge/Structure Assessment Form

This form will be completed and submitted to the District Environmental Manager by the Contractor prior to conducting any work below the deck surface either from the underside; from activities above that bore down to the underside; from activities that could impact expansion joints; from deck removal on bridges; or from structure demolition for bridges/structures within 1000 feet of suitable bat habitat.

DOT Project #	Water Body	Date/Time of Inspection	Within 1,000ft of suitable bat habitat (circle one)
Des. 1700179	Cotton Lake Ditch	September 20, 2018 / 4:00 PM	<div style="border: 1px solid red; border-radius: 50%; width: 40px; height: 20px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <span style="margin: 0 5px;">Yes</span> </div> <div style="margin: 5px 0 0 20px;">No</div>

Route	County	Federal Structure ID
SR 5	LaGrange	CV 005-044-91.27

**If the bridge/structure is 1,000 feet or more from suitable bat habitat (e.g., an urban or agricultural area without suitable foraging habitat or corridors linking the bridge to suitable foraging habitat), check box and STOP HERE. No assessment required.**

**Please submit to the U.S. Fish and Wildlife Service.**

**Areas Inspected (Check all that apply)**

Bridges		Culverts/Other Structures		Summary Info (circle all that apply)			
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep		Crevices, rough surfaces or imperfections in concrete	X	Human disturbance or traffic under bridge/in culvert or at the structure	<div style="border: 1px solid red; border-radius: 50%; width: 30px; height: 20px; display: flex; align-items: center; justify-content: center;"> <span style="margin: 0 5px;">High</span> </div>	Low	None
All crevices >12" deep & not sealed		Spaces between walls, ceiling joists	X	Possible corridors for netting	<div style="border: 1px solid red; border-radius: 50%; width: 40px; height: 20px; display: flex; align-items: center; justify-content: center;"> <span style="margin: 0 5px;">None/poor</span> </div>	Marginal	Excellent
All guardrails							
All expansion joints							
Spaces between concrete end walls and the bridge deck							

Vertical surfaces on concrete I-beams							
---------------------------------------	--	--	--	--	--	--	--

**Evidence of Bats (Circle all that apply)** Presence of one or more indicators is sufficient evidence that bats may be using the structure.

None

Visual (e.g. survey, thermal, emergent etc.)

- Live \_\_ number seen
- Dead \_\_ number seen

Photo documentation Y/N

Guano

Odor Y/N

Photo documentation Y/N

Staining definitively from bats

Photo documentation Y/N

Audible

<b>Assessment Conducted By:</b> <u>Cory Shumate</u> <b>Signature(s):</b> <u><i>CShumate</i></u>
<b>District Environmental Use Only:</b> Date Received by District Environmental Manager: _____

**DOT Bat Assessment Form Instructions**

1. Assessments must be completed no more than 2 years prior to conducting any work below the deck surface on all bridges, regardless of whether assessments have been conducted in the past.
2. Any bridge/structure suspected of providing habitat for any species of bat will be removed from work schedules until such time that the DOT has coordinated with the USFWS. Additional studies may be undertaken by the DOT to determine what species may be utilizing each structure identified as supporting bats prior to allowing any work to proceed.
3. Any questions should be directed to the District Environmental Manager.

## APPENDIX D: Bridge/Structure Assessment Form

This form will be completed and submitted to the District Environmental Manager by the Contractor prior to conducting any work below the deck surface either from the underside; from activities above that bore down to the underside; from activities that could impact expansion joints; from deck removal on bridges; or from structure demolition for bridges/structures within 1000 feet of suitable bat habitat.

DOT Project #	Water Body	Date/Time of Inspection	Within 1,000ft of suitable bat habitat (circle one)
Des. 1700179	N/A	September 20, 2018 / 5:50 PM	<div style="border: 1px solid red; border-radius: 50%; width: 40px; height: 20px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <span style="font-size: 0.8em;">Yes</span> </div> <div style="margin-top: 5px;"> <span style="font-size: 0.8em;">No</span> </div>

Route	County	Federal Structure ID
SR 5	LaGrange	CV 005-044-92.32

**If the bridge/structure is 1,000 feet or more from suitable bat habitat (e.g., an urban or agricultural area without suitable foraging habitat or corridors linking the bridge to suitable foraging habitat), check box and STOP HERE. No assessment required.**

**Please submit to the U.S. Fish and Wildlife Service.**

**Areas Inspected (Check all that apply)**

Bridges		Culverts/Other Structures		Summary Info (circle all that apply)			
All vertical crevices sealed at the top and 0.5-1.25" wide & ≥4" deep		Crevices, rough surfaces or imperfections in concrete	X	Human disturbance or traffic under bridge/in culvert or at the structure	<div style="border: 1px solid red; border-radius: 50%; width: 30px; height: 20px; display: flex; align-items: center; justify-content: center;"> <span style="font-size: 0.8em;">High</span> </div>	Low	None
All crevices >12" deep & not sealed		Spaces between walls, ceiling joists	X	Possible corridors for netting	<div style="border: 1px solid red; border-radius: 50%; width: 40px; height: 20px; display: flex; align-items: center; justify-content: center;"> <span style="font-size: 0.8em;">None/poor</span> </div>	Marginal	Excellent
All guardrails							
All expansion joints							
Spaces between concrete end walls and the bridge deck							

Vertical surfaces on concrete I-beams							
---------------------------------------	--	--	--	--	--	--	--

**Evidence of Bats (Circle all that apply)** Presence of one or more indicators is sufficient evidence that bats may be using the structure.

None

Visual (e.g. survey, thermal, emergent etc.)

- Live \_\_ number seen
- Dead \_\_ number seen

Photo documentation Y/N

Guano

Odor Y/N

Photo documentation Y/N

Staining definitively from bats

Photo documentation Y/N

Audible

<b>Assessment Conducted By:</b> <u>Cory Shumate</u> <b>Signature(s):</b> <u><i>CShumate</i></u>
<b>District Environmental Use Only:</b> Date Received by District Environmental Manager: _____

**DOT Bat Assessment Form Instructions**

1. Assessments must be completed no more than 2 years prior to conducting any work below the deck surface on all bridges, regardless of whether assessments have been conducted in the past.
2. Any bridge/structure suspected of providing habitat for any species of bat will be removed from work schedules until such time that the DOT has coordinated with the USFWS. Additional studies may be undertaken by the DOT to determine what species may be utilizing each structure identified as supporting bats prior to allowing any work to proceed.
3. Any questions should be directed to the District Environmental Manager.



## United States Department of the Interior



### FISH AND WILDLIFE SERVICE

Indiana Ecological Services Field Office

620 South Walker Street

Bloomington, IN 47403-2121

Phone: (812) 334-4261 Fax: (812) 334-4273

<http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html>

In Reply Refer To:

May 26, 2020

Consultation Code: 03E12000-2020-SLI-1321

Event Code: 03E12000-2020-E-07132

Project Name: Des # 1700179 Roadway Reconstruction Project SR 5 From US 20 to School Street

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The attached species list identifies any federally threatened, endangered, proposed and candidate species that may occur within the boundary of your proposed project or may be affected by your proposed project. The list also includes designated critical habitat if present within your proposed project area or affected by your project. This list is provided to you as the initial step of the consultation process required under section 7(c) of the Endangered Species Act, also referred to as Section 7 Consultation.

Section 7 of the Endangered Species Act of 1973 requires that actions authorized, funded, or carried out by Federal agencies not jeopardize federally threatened or endangered species or adversely modify designated critical habitat. To fulfill this mandate, Federal agencies (or their designated non-federal representative) must consult with the Service if they determine their project “may affect” listed species or critical habitat.

Under 50 CFR 402.12(e) (the regulations that implement Section 7 of the Endangered Species Act) the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally. You may verify the list by visiting the ECOS-IPaC website <http://ecos.fws.gov/ipac/> at regular intervals during project planning and implementation and completing the same process you used to receive the attached list. As an alternative, you may contact this Ecological Services Field Office for updates.

Please use the species list provided and visit the U.S. Fish and Wildlife Service's Region 3 Section 7 Technical Assistance website at - <http://www.fws.gov/midwest/endangered/section7/s7process/index.html>. This website contains step-by-step instructions which will help you

determine if your project will have an adverse effect on listed species and will help lead you through the Section 7 process.

For all **wind energy projects** and **projects that include installing towers that use guy wires or are over 200 feet in height**, please contact this field office directly for assistance, even if no federally listed plants, animals or critical habitat are present within your proposed project or may be affected by your proposed project.

Although no longer protected under the Endangered Species Act, be aware that bald eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*) and Migratory Bird Treaty Act (16 U.S.C. 703 *et seq.*), as are golden eagles. Projects affecting these species may require measures to avoid harming eagles or may require a permit. If your project is near an eagle nest or winter roost area, see our Eagle Permits website at <http://www.fws.gov/midwest/midwestbird/EaglePermits/index.html> to help you determine if you can avoid impacting eagles or if a permit may be necessary.

We appreciate your concern for threatened and endangered species. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

## Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Indiana Ecological Services Field Office**

620 South Walker Street

Bloomington, IN 47403-2121

(812) 334-4261

## Project Summary

Consultation Code: 03E12000-2020-SLI-1321

Event Code: 03E12000-2020-E-07132

Project Name: Des # 1700179 Roadway Reconstruction Project SR 5 From US 20 to School Street

Project Type: TRANSPORTATION

Project Description: The project extends along SR 5 from US 20 to School Street, in the Town of Shipshewana, Middlebury Township, Lagrange County, Indiana. Specifically, the project is located in Sections 10, 11, 14, and 15, Township 37 North, Range 8 East as illustrated on the Shipshewana, Indiana 7.5 minute USGS topographic quadrangle.

The need for this project is due to the crash history and the presence of horse-drawn buggy traffic on this segment of SR 5. The purpose of this project is to reduce the crash rate and to provide a safe roadway for vehicles and buggies.

The preferred alternative is to apply a preventative maintenance overlay on the existing pavement while widening the roadway to provide a two-way left-turn lane along the 1.44-mile corridor. The proposed pavement section consists of one 14-foot-wide two-way left-turn lane, two 11-foot-wide through lanes, and two 10-foot-wide buggy lanes. Curb and gutter will be added along both sides of the roadway with a graded shelf to the right-of-way line to accommodate future sidewalk construction. Driveways through the project area will be reconstructed as needed. Minor drainage structures (underdrains), such as pipe culverts, may be newly installed, replaced, and/or removed, as needed, to perpetuate drainage through the project area.

Specifically, the twin, barrel culverts that carry Cotton Lake Ditch beneath SR 5 near the south end of the project will be replaced and modified. The existing southern culvert (CV 005-044-91.27) is a 3ft.-8 inch corrugated steel pipe. This pipe will be replaced with a 6'-5" steel pipe. The existing northern culvert (CV 005-044-91.32) is a 5ft. round, concrete pipe. The concrete pipe is in good condition and will be retained in place; however, the west (outlet) end of the pipe will be extended to accommodate the widening of the roadway.

Traffic will be maintained through the project area using phased construction and temporary lane closures. Additional permanent and/or

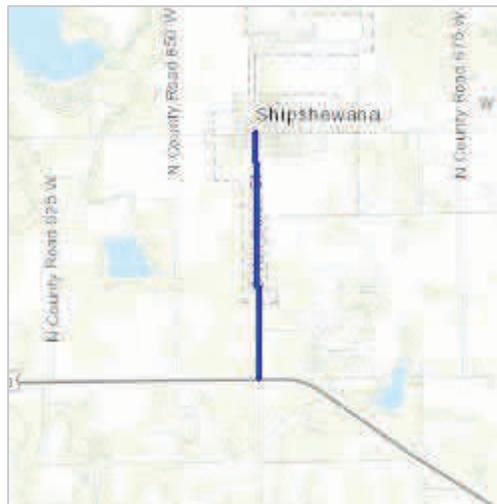
temporary right-of-way will be necessary to complete the project, but unknown amounts at this time.

There is suitable summer habitat located beyond the project area; however, no trees will be removed to build the project. Construction is scheduled to begin in Spring 2022 and end in Fall 2022.

No permanent lighting will be modified or newly installed. Temporary lighting may be utilized at the contractor's discretion. A review of the USFWS bat database by INDOT on April 24, 2020 did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. There are no bridges involved with this project.

**Project Location:**

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/41.66560178894106N85.58036388288303W>



Counties: LaGrange, IN

## Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## Mammals

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/5949">https://ecos.fws.gov/ecp/species/5949</a> Species survey guidelines: <a href="https://ecos.fws.gov/ipac/guideline/survey/population/1/office/31440.pdf">https://ecos.fws.gov/ipac/guideline/survey/population/1/office/31440.pdf</a>	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> <li>▪ Incidental take of the NLEB is not prohibited here. Federal agencies may consult using the 4(d) rule streamlined process. Transportation projects may consult using the programmatic process. See <a href="http://www.fws.gov/midwest/endangered/mammals/nleb/index.html">www.fws.gov/midwest/endangered/mammals/nleb/index.html</a></li> </ul> Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	Threatened

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.



## United States Department of the Interior



### FISH AND WILDLIFE SERVICE

Indiana Ecological Services Field Office

620 South Walker Street

Bloomington, IN 47403-2121

Phone: (812) 334-4261 Fax: (812) 334-4273

<http://www.fws.gov/midwest/Endangered/section7/s7process/step1.html>

IPaC Record Locator: 502-21351363

May 24, 2020

Subject: Consistency letter for the 'Des # 1700179 Roadway Reconstruction Project SR 5 From US 20 to School Street' project (TAILS 03E12000-2020-R-1321) under the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request to verify that the **Des # 1700179 Roadway Reconstruction Project SR 5 From US 20 to School Street** (Proposed Action) may rely on the concurrence provided in the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 *et seq.*).

Based on the information you provided (Project Description shown below), you have determined that the Proposed Action is within the scope and adheres to the criteria of the PBO, including the adoption of applicable avoidance and minimization measures, and may affect, but is not likely to adversely affect the endangered Indiana bat (*Myotis sodalis*) and/or the threatened Northern long-eared bat (*Myotis septentrionalis*). Consultation with the Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) is required.

This "may affect - not likely to adversely affect" determination becomes effective when the lead Federal action agency or designated non-federal representative requests the Service rely on the PBO to satisfy the agency's consultation requirements for this project.

Please provide this consistency letter to the lead Federal action agency or its designated non-federal representative with a request for review, and as the agency deems appropriate, to submit for concurrence verification through the IPaC system. The lead Federal action agency or designated non-federal representative should log into IPaC using their agency email account and click "Search by record locator". They will need to enter the record locator **502-21351363**.

**For Proposed Actions that include bridge/structure removal, replacement, and/or maintenance activities:** If your initial bridge/structure assessments failed to detect Indiana bats, but you later detect bats during construction, please submit the Post Assessment Discovery of Bats at Bridge/Structure Form (User Guide Appendix E) to this Service Office. In these instances, potential incidental take of Indiana bats may be exempted provided that the take is reported to the Service.

If the Proposed Action may affect any other federally-listed or proposed species and/or designated critical habitat, additional consultation between the lead Federal action agency and this Service Office is required. If the proposed action has the potential to take bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act may also be required. In either of these circumstances, please advise the lead Federal action agency accordingly.

## **Project Description**

The following project name and description was collected in IPaC as part of the endangered species review process.

### **Name**

Des # 1700179 Roadway Reconstruction Project SR 5 From US 20 to School Street

### **Description**

The project extends along SR 5 from US 20 to School Street, in the Town of Shiphewana, Middlebury Township, Lagrange County, Indiana. Specifically, the project is located in Sections 10, 11, 14, and 15, Township 37 North, Range 8 East as illustrated on the Shiphewana, Indiana 7.5 minute USGS topographic quadrangle.

The need for this project is due to the crash history and the presence of horse-drawn buggy traffic on this segment of SR 5. The purpose of this project is to reduce the crash rate and to provide a safe roadway for vehicles and buggies.

The preferred alternative is to apply a preventative maintenance overlay on the existing pavement while widening the roadway to provide a two-way left-turn lane along the 1.44-mile corridor. The proposed pavement section consists of one 14-foot-wide two-way left-turn lane, two 11-foot-wide through lanes, and two 10-foot-wide buggy lanes. Curb and gutter will be added along both sides of the roadway with a graded shelf to the right-of-way line to accommodate future sidewalk construction. Driveways through the project area will be reconstructed as needed. Minor drainage structures (underdrains), such as pipe culverts, may be newly installed, replaced, and/or removed, as needed, to perpetuate drainage through the project area.

Specifically, the twin, barrel culverts that carry Cotton Lake Ditch beneath SR 5 near the south end of the project will be replaced and modified. The existing southern culvert (CV 005-044-91.27) is a 3ft.-8 inch corrugated steel pipe. This pipe will be replaced with a 6'-5" steel pipe. The existing northern culvert (CV 005-044-91.32) is a 5ft. round, concrete pipe. The concrete pipe is in good condition and will be retained in place; however, the west (outlet) end of the pipe will be extended to accommodate the widening of the roadway.

Traffic will be maintained through the project area using phased construction and temporary lane closures. Additional permanent and/or temporary right-of-way will be necessary to complete the project.

There is suitable summer habitat located beyond the project area; however, no trees will be removed to build the project. Construction is scheduled to begin in Spring 2022 and end in Fall 2022.

No permanent lighting will be modified or newly installed. Temporary lighting may be utilized at the contractor's discretion. A review of the USFWS bat database by INDOT on April 24, 2020 did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. There are no bridges involved with this project.

## Determination Key Result

Based on your answers provided, this project(s) may affect, but is not likely to adversely affect the endangered Indiana bat and/or the threatened Northern long-eared bat, therefore, consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required. However, also based on your answers provided, this project may rely on the concurrence provided in the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

## Qualification Interview

1. Is the project within the range of the Indiana bat<sup>[1]</sup>?

[1] See [Indiana bat species profile](#)

**Automatically answered**

Yes

2. Is the project within the range of the Northern long-eared bat<sup>[1]</sup>?

[1] See [Northern long-eared bat species profile](#)

**Automatically answered**

Yes

3. Which Federal Agency is the lead for the action?

A) *Federal Highway Administration (FHWA)*

4. Are *all* project activities limited to non-construction<sup>[1]</sup> activities only? (examples of non-construction activities include: bridge/abandoned structure assessments, surveys, planning and technical studies, property inspections, and property sales)

[1] Construction refers to activities involving ground disturbance, percussive noise, and/or lighting.

No

5. Does the project include *any* activities that are **greater than** 300 feet from existing road/rail surfaces<sup>[1]</sup>?

[1] Road surface is defined as the actively used [e.g. motorized vehicles] driving surface and shoulders [may be pavement, gravel, etc.] and rail surface is defined as the edge of the actively used rail ballast.

No

6. Does the project include *any* activities **within** 0.5 miles of a known Indiana bat and/or NLEB hibernaculum<sup>[1]</sup>?

[1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

*No*

7. Is the project located **within** a karst area?

*No*

8. Is there *any* suitable<sup>[1]</sup> summer habitat for Indiana Bat or NLEB **within** the project action area<sup>[2]</sup>? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

[1] See the Service's [summer survey guidance](#) for our current definitions of suitable habitat.

[2] The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR Section 402.02). Further clarification is provided by the [national consultation FAQs](#).

*No*

9. Does the project include wetland or stream protection activities associated with compensatory wetland mitigation?

*No*

10. Does the project include slash pile burning?

*No*

11. Does the project include *any* bridge removal, replacement, and/or maintenance activities (e.g., any bridge repair, retrofit, maintenance, and/or rehabilitation work)?

*Yes*

12. Is there *any* suitable habitat<sup>[1]</sup> for Indiana bat or NLEB **within** 1,000 feet of the bridge? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

[1] See the Service's current [summer survey guidance](#) for our current definitions of suitable habitat.

*Yes*

13. Has a bridge assessment<sup>[1]</sup> been conducted **within** the last 24 months<sup>[2]</sup> to determine if the bridge is being used by bats?

[1] See [User Guide Appendix D](#) for bridge/structure assessment guidance

[2] Assessments must be completed no more than 2 years prior to conducting any work below the deck surface on all bridges that meet the physical characteristics described in the Programmatic Consultation, regardless of whether assessments have been conducted in the past. Due to the transitory nature of bat use, a negative result in one year does not guarantee that bats will not use that bridge/structure in subsequent years.

Yes

**SUBMITTED DOCUMENTS**

- *USFWS Bat Inspection CV 005-044-91.27 south.pdf* <https://ecos.fws.gov/ipac/project/J2RGDCN5L5BHYNQMPLLKOFXMQ/projectDocuments/21820445>
- *USFWS Bat Inspection CV 005-044-92.32 North.pdf* <https://ecos.fws.gov/ipac/project/J2RGDCN5L5BHYNQMPLLKOFXMQ/projectDocuments/21820448>

14. Did the bridge assessment detect *any* signs of Indiana bats and/or NLEBs roosting in/under the bridge (bats, guano, etc.)<sup>[1]</sup>?

[1] If bridge assessment detects signs of *any* species of bats, coordination with the local FWS office is needed to identify potential threatened or endangered bat species. Additional studies may be undertaken to try to identify which bat species may be utilizing the bridge prior to allowing *any* work to proceed.

Note: There is a small chance bridge assessments for bat occupancy do not detect bats. Should a small number of bats be observed roosting on a bridge just prior to or during construction, such that take is likely to occur or does occur in the form of harassment, injury or death, the PBO requires the action agency to report the take. Report all unanticipated take within 2 working days of the incident to the USFWS. Construction activities may continue without delay provided the take is reported to the USFWS and is limited to 5 bats per project.

No

15. Will the bridge removal, replacement, and/or maintenance activities include installing new or replacing existing **permanent** lighting?

No

16. Does the project include the removal, replacement, and/or maintenance of *any* structure other than a bridge? (e.g., rest areas, offices, sheds, outbuildings, barns, parking garages, etc.)

No

17. Will the project involve the use of **temporary** lighting *during* the active season?  
*Yes*
18. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **temporary** lighting will be used?  
*Yes*
19. Will the project install new or replace existing **permanent** lighting?  
*No*
20. Does the project include percussives or other activities (**not including tree removal/trimming or bridge/structure work**) that will increase noise levels above existing traffic/background levels?  
*No*
21. Are *all* project activities that are **not associated with** habitat removal, tree removal/trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives, limited to actions that DO NOT cause any additional stressors to the bat species?
- Examples: lining roadways, unlighted signage , rail road crossing signals, signal lighting, and minor road repair such as asphalt fill of potholes, etc.  
*Yes*
22. Will the project raise the road profile **above the tree canopy**?  
*No*
23. Is the location of this project consistent with a No Effect determination in this key?  
**Automatically answered**  
*Yes, because the project action area is not within suitable Indiana bat and/or NLEB summer habitat and is outside of 0.5 miles of a hibernaculum.*
24. Is the bridge removal, replacement, or maintenance activities portion of this project consistent with a No Effect determination in this key?  
**Automatically answered**  
*Yes, because the bridge has been assessed using the criteria documented in the BA and no signs of bats were detected*

**25. General AMM 1**

Will the project ensure *all* operators, employees, and contractors working in areas of known or presumed bat habitat are aware of *all* FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable Avoidance and Minimization Measures?

Yes

**26. Lighting AMM 1**

Will *all* **temporary** lighting be directed away from suitable habitat during the active season?

Yes

## Project Questionnaire

1. Have you made a No Effect determination for *all* other species indicated on the FWS IPaC generated species list?

N/A

2. Have you made a May Affect determination for *any* other species on the FWS IPaC generated species list?

N/A

3. Please describe the proposed bridge work:

*The twin, barrel culverts that carry Cotton Lake Ditch beneath SR 5 near the south end of the project will be replaced and modified. The existing southern culvert (CV 005-044-91.27) is a 3ft.-8 inch corrugated steel pipe. This pipe will be replaced with a 6'-5" steel pipe. The existing northern culvert (CV 005-044-91.32) is a 5ft. round, concrete pipe. The concrete pipe is in good condition and will be retained in place; however, the west (outlet) end of the pipe will be extended to accommodate the widening of the roadway.*

4. Please state the timing of all proposed bridge work:

*Spring 2022 and end in Fall 2022*

5. Please enter the date of the bridge assessment:

*September 20, 2018*

## Avoidance And Minimization Measures (AMMs)

This determination key result includes the commitment to implement the following Avoidance and Minimization Measures (AMMs):

**GENERAL AMM 1**

Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs.

**LIGHTING AMM 1**

Direct temporary lighting away from suitable habitat during the active season.

## **Determination Key Description: FHWA, FRA, FTA Programmatic Consultation For Transportation Projects Affecting NLEB Or Indiana Bat**

This key was last updated in IPaC on December 02, 2019. Keys are subject to periodic revision.

This decision key is intended for projects/activities funded or authorized by the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and/or Federal Transit Administration (FTA), which may require consultation with the U.S. Fish and Wildlife Service (Service) under Section 7 of the Endangered Species Act (ESA) for the endangered **Indiana bat** (*Myotis sodalis*) and the threatened **Northern long-eared bat** (NLEB) (*Myotis septentrionalis*).

This decision key should only be used to verify project applicability with the Service's [February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects](#). The programmatic biological opinion covers limited transportation activities that may affect either bat species, and addresses situations that are both likely and not likely to adversely affect either bat species. This decision key will assist in identifying the effect of a specific project/activity and applicability of the programmatic consultation. The programmatic biological opinion is not intended to cover all types of transportation actions. Activities outside the scope of the programmatic biological opinion, or that may affect ESA-listed species other than the Indiana bat or NLEB, or any designated critical habitat, may require additional ESA Section 7 consultation.

# **APPENDIX D: Section 106 of the National Historic Preservation Act**

**Minor Projects PA Project Assessment Form– Category B Projects with Archaeology Work**

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**Date:** 6/9/2020

**Project Designation Number:** 1700179

**Route Number:** State Road (SR) 5, locally known as Van Buren Street

**Project Description:** SR 5 from US 20 to School Street, 1.43 miles north of US 20

The preferred alternative is to apply a preventative maintenance overlay on the existing pavement while widening the roadway to provide a two-way left-turn lane along the 1.44-mile corridor. The proposed pavement section consists of one 14-foot-wide two-way left-turn lane, two 11-foot-wide through lanes, and two 10-foot-wide buggy lanes. Curb and gutter will be added along both sides of the roadway with a graded shelf to the right-of-way line to accommodate future sidewalk construction. Driveways through the project area will be reconstructed as needed. Minor drainage structures, such as pipe culverts, may be newly installed, replaced, and/or removed, as needed, to perpetuate drainage through the project area. The survey area is roughly rectangular shaped with a length of approximately 2.3 km (1.4 mi) along SR 5 and approximately 30.7 m (100.7 ft) wide at the widest. The survey area encompasses 7.0 ha (17.3 ac). Curb and gutter will be added along both sides of the roadway with a graded shelf to the right-of-way line to accommodate future sidewalk construction. More than 0.5 acre of right-of-way (ROW) acquisition is anticipated for this project.

**Feature crossed (if applicable):** N/A

**Township:** Newbury Township

**City/County:** Shpshewana/LaGrange County

**Information reviewed (please check all that apply):**

- General project location map     USGS map     Aerial photograph     Interim Report
- Written description of project area     General project area photos     Soil survey data
- Previously completed historic property reports     Previously completed archaeology reports
- Bridge Inspection Information     SHAARD     SHAARD GIS     Streetview Imagery

**Other (please specify):** Indiana State Historic Architectural and Archaeological Research Database (SHAARD); Indiana Buildings, Bridges, and Cemeteries Map website; *LaGrange County Interim Report*; online street-view imagery; ArcMap GIS; LaGrange County GIS (accessed via <https://beacon.schneidercorp.com>); MPPA Submission Form (including maps and photographs) sent by Metric Environmental, dated May 11<sup>th</sup>, 2020 and on file at INDOT CRO.

Samuel P. Snell

2020 Phase Ia Archaeological Survey for the SR 5 Road Improvement Project from US 20 To School Street, 1.43 miles N of US 20, Shpshewana, Newbury Township, Lagrange County, Indiana Des. No. 1700179.

## **Results of the Records Review for Above-Ground Resources:**

With regard to above-ground resources, an INDOT Cultural Resources historian who meets the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61 performed a desktop review, checking the Indiana Register of Historic Sites and Structures (State Register) and National Register of Historic Places (National Register) lists for LaGrange County. No listed resources are located immediately adjacent to the project area, a distance that serves as an adequate area of potential effects.

The Indiana Historic Sites and Structures Inventory (IHSSI) and National Register information for LaGrange County are available in the Indiana State Historic Architectural and Archaeological Research Database (SHAARD) and the Indiana Historic Buildings, Bridges, and Cemeteries Map (IHBBCM). The *LaGrange County Interim Report* (2009; Newbury Township, Town of Shipshewana Scattered Sites) of the Indiana Historic Sites and Structures Inventory (IHSSI) was also consulted. No IHSSI documented resources rated higher than "contributing" are located immediately adjacent to the project area.

According to the IHSSI rating system, generally properties rated "contributing" do not possess the level of historical or architectural significance necessary to be considered individually National Register-eligible, although they would contribute to a historic district. If they retain material integrity, properties rated "notable" might possess the necessary level of significance after further research. Properties rated "outstanding" usually possess the necessary level of significance to be considered National Register eligible if they retain material integrity.

The project area was reviewed by an INDOT CRO historian through aerial photography, online street-view imagery, and the LaGrange County GIS website. The project area is located in a small-town setting with adjacent above-ground resources primarily consisting of mid-twentieth to early twenty-first century residential and commercial buildings. None of these resources appear to possess the significance or integrity required to be considered NRHP-eligible.

**Based on the available information, as summarized above, no above-ground concerns exist.**

### **Archaeology Report Author/Date:**

Samuel P. Snell/May 26, 2020

### **Summary of Archaeology Investigation Results:**

An archaeological records check and Phase I A reconnaissance survey of the project area were conducted by Metric Environmental LLC, (Snell 5/26/2020 )The records check found that the project area had been previously examined for archaeological resources by Klabacka in 2008, who conducted an archaeological survey for the proposed added travel lanes to SR 5. The records check noted that no previously recorded sites have been identified within or adjacent to the project area. An area larger than the anticipated project construction footprint was surveyed to facilitate any reasonable construction design plan changes. A 17.2-acre survey area was examined through the excavation of shovel probes, bucket augers, pedestrian survey, and visual inspection of disturbed areas. No evidence for archaeological deposits were identified by the field reconnaissance.

The report was reviewed by INDOT Cultural Resources personnel who meet the Secretary of the Interior's Professional Qualification Standards as per 36 CFR Part 61. It is our opinion that the report is adequate enough to clear this project under the MPPA but are withholding formal approval at this time. The report will be sent to DHPA who will review it for adherence to the state's archaeological guidelines and may question why some areas were not resurveyed. Regardless, we are confident enough in the work that was performed to state that there are no archaeological concerns because the project area was also surveyed in 2008.

Does the project appear to fall under the Minor Projects PA? yes  no

If yes, please specify category and number (**applicable conditions are highlighted**):

A-3. Replacement, repair, lining, or extension of culverts and other drainage structures that do not exhibit wood, stone or brick structures or parts therein and are in previously disturbed soils.

B-1. Replacement, repair, or installation of curbs, curb ramps, or sidewalks, including when such projects are associated with roadway work such as surface replacement, reconstruction, rehabilitation, or resurfacing projects, including overlays, shoulder treatments, pavement repair, seal coating, pavement grinding, and pavement marking, under the following conditions **[BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied]**:

**Condition A (Archaeological Resources)**

One of the two conditions listed below must be satisfied (*EITHER Condition i or Condition ii must be satisfied*):

- i. Work occurs in previously disturbed soils; *OR*
- ii. **Work occurs in undisturbed soils** and an archaeological investigation conducted by the applicant and reviewed by INDOT Cultural Resources Office determines that no National Register-listed or potentially National Register-eligible archaeological resources are present within the project area. If the archaeological investigation locates National Register-listed or potentially National Register-eligible archaeological resources, then full Section 106 review will be required. Copies of any archaeological reports prepared for the project will be provided to the Division of Historic Preservation and Archaeology (DHPA) and any archaeological site form information will be entered directly into the State Historic Architectural and Archaeological Database (SHAARD) by the applicant. The archaeological reports will also be available for viewing (by Tribes only) on INSCOPE.

**Condition B (Above-Ground Resources)**

One of the two conditions listed below must be satisfied (*EITHER Condition i or Condition ii must be satisfied*):

- i. **Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource;** *OR*
- ii. Work occurs adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource under one of the two additional conditions listed below (*EITHER Condition a OR Condition b must be met and field work and documentation must be completed as described below*):
  - a. No unusual features, including but not limited to historic brick or stone sidewalks, curbs or curb ramps, stepped or elevated sidewalks and historic brick or stone retaining walls are present in the project area adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource; *OR*
  - b. Unusual features, including but not limited to historic brick or stone sidewalks, curbs or curb ramps, stepped or elevated sidewalks and historic brick or stone retaining walls are present in the project area adjacent to or within a National Register-listed or National Register-eligible individual above-ground resource or district and ANY ONE of the conditions (1, 2, or 3) listed below must be fulfilled:
    1. Unusual features described above will not be impacted by the project. Firm commitments regarding the avoidance of these features must be listed in the MPPA determination form and the NEPA document and must be entered into the INDOT Project Commitments Database. These projects will also be flagged for quality assurance reviews by INDOT Cultural Resources Office during/after project construction.

2. Unusual features described above have been determined not to contribute to the significance of the historic resource by INDOT Cultural Resources Office in consultation with the SHPO based on an analysis and justification prepared by their staff or review of such information from other qualified professional historians.
3. Impacts to unusual features described above have been determined by INDOT Cultural Resources Office to be so minimal that they do not diminish any of the characteristics that contribute to the significance of the historic resource, based on an analysis and justification prepared by their staff or review of such information from other qualified professional historians.

**Field work and documentation required for fulfillment of condition B-ii:**

When the project takes place adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource, it must be field checked by INDOT Cultural Resources Office staff or other qualified professional historian (meeting the Secretary of Interior’s Professional Qualification standards [48 Federal Register (FR) 44716]) and photographic documentation must be prepared illustrating both the presence and/or absence of any unusual features along the project route adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource. This documentation must be submitted to INDOT Cultural Resources Office for review.

The only exception would be when it is determined that previous projects along the project route have eliminated the possibility that unusual features adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource exist. In this situation, documentation illustrating the modifications made through previous projects, such as replacement of curbs, curb ramps, or sidewalks, including plan sheets or contract documents and current photographs of the project area, must be submitted to the INDOT Cultural Resources Office for review. With such approved documentation, a site visit by a qualified professional is not required, unless questions arise during the review process. INDOT Cultural Resources Office has the discretion to require the project applicant’s qualified professional conduct a site visit when it is not clear if unusual features may be present in the project area.

- B-3.** Construction of added travel, turning, or auxiliary lanes (e.g., bicycle, truck climbing, acceleration and deceleration lanes) and shoulder widening under the following conditions ***[BOTH Condition A, which pertains to Archaeological Resources, and Condition B, which pertains to Above-Ground Resources, must be satisfied]:***

**Condition A (Archaeological Resources)**

One of the two conditions listed below must be met (*EITHER Condition i or Condition ii must be satisfied*):

- i. Work occurs in previously disturbed soils; *OR*
- ii. **Work occurs in undisturbed soils** and an archaeological investigation conducted by the applicant and reviewed by INDOT Cultural Resources Office determines that no National Register-listed or potentially National Register-eligible archaeological resources are present within the project area. If the archaeological investigation locates National Register-listed or potentially National Register-eligible archaeological resources, then full Section 106 review will be required. Copies of any archaeological reports prepared for the project will be provided to the DHPA and any archaeological site form information will be entered directly into the SHAARD by the applicant. The archaeological reports will also be available for viewing (by Tribes only) on INSCOPE.

**Condition B (Above-Ground Resources)**

**Work does not occur adjacent to or within a National Register-listed or National Register-eligible district or individual above-ground resource.**

**Additional comments:** If any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, construction in the immediate area of the find will be stopped, and the INDOT Cultural Resources Office and the Division of Historic Preservation and Archaeology will be notified immediately.

**INDOT Cultural Resources staff reviewer(s):** Patricia Jo Korzeniewski and Clint Kelly

*\*\*\*Be sure to attach this form to the National Environmental Policy Act documentation for this project. Also, the NEPA documentation shall reference and include the description of the specific stipulation in the PA that qualifies the project as exempt from further Section 106 review.*

**Category A consists of projects that, by their nature, have no effect on properties listed in or eligible for inclusion in the National Register of Historic Places (hereinafter referred to as the “National Register”) and do not require review by INDOT Cultural Resources Office. All of the work under this Category must occur in previously disturbed soils, which are defined as soils that have been completely altered or displaced by earthmoving or other modern manipulation.**

1. Any work on bridges limited to substructure or superstructure elements without replacing, widening, or elevating the superstructure under the conditions listed below (***BOTH Conditions A and B must be met***). This category **does not** include bridge replacement projects (when both superstructure and substructure are removed):
  - A. The project takes place in previously disturbed soils; *AND*
  - B. With regard to the bridges, at least one of the conditions (i, ii or iii) listed below must be satisfied:
    - i. The latest Historic Bridge Inventory identified the bridge as non-historic (see <http://www.in.gov/indot/2531.htm>);
    - ii. The bridge was built after 1945, and is a common type as defined in Section V. of the *Program Comment Issued for Streamlining Section 106 Review for Actions Affecting Post-1945 Concrete and Steel Bridges* issued by the Advisory Council on Historic Preservation on November 2, 2012 for so long as that Program Comment remains in effect AND the considerations listed in Section IV of the Program Comment do not apply;
    - iii. The bridge is part of the Interstate system and was determined not eligible for the National Register under the Section 106 Exemption Regarding Effects to the Interstate Highway System adopted by the Advisory Council on Historic Preservation on March 10, 2005, for so long as that Exemption remains in effect.
2. All work within interchanges and within medians of divided highways in previously disturbed soils.
3. Replacement, repair, lining, or extension of culverts and other drainage structures that do not exhibit wood, stone or brick structures or parts therein and are in previously disturbed soils.
4. Roadway work associated with surface replacement, reconstruction, rehabilitation, or resurfacing projects, including overlays, shoulder treatments, pavement repair, seal coating, pavement grinding, and pavement marking within previously disturbed soils where replacement, repair, or installation of curbs, curb ramps or sidewalks will not be required.
5. Repair, in-kind replacement or upgrade of existing lighting, signals, signage, and other traffic control devices in previously disturbed soils.
6. Repair, replacement, or upgrade of existing safety appurtenances such as guardrails, barriers, glare screens, and crash attenuators in previously disturbed soils.
7. Repair or in-kind replacement of fencing and hardscape landscaping elements and/or replacement of existing plant materials in previously disturbed soils and installation of new fencing and hardscape landscaping elements and plant materials limited to locations within interstate right-of way within previously disturbed soils.
8. Installation of new or modification of existing traffic control devices and systems, including signs, signals, markings, illumination, other warning devices and their supports, to improve safety at railway crossings in previously disturbed soils.
9. Installation, repair, or replacement of erosion control measures along roadways, waterways and bridge piers within previously disturbed soils.



# INDIANA ARCHAEOLOGICAL SHORT REPORT

State Form 54566 (1-11)

## INDIANA DEPARTMENT OF NATURAL RESOURCES DIVISION OF HISTORIC PRESERVATION AND ARCHAEOLOGY

402 West Washington Street, Room W274  
Indianapolis, Indiana 46204-2739  
Telephone Number: (317) 232-1646  
Fax Number: (317) 232-0693  
E-mail: [dhpa@dnr.IN.gov](mailto:dhpa@dnr.IN.gov)

Where applicable, the use of this form is recommended but not required by the Division of Historic Preservation and Archaeology.

Author: Samuel P. Snell, MS, RPA

Date (month, day, year): May 26, 2020

Project Title: Phase IA Archaeological Survey for the SR 5 Road Improvement Project from US 20 to School Street 1.43 Miles North of US 20, Des. No. 1700179, Shipshewana, Newbury Township, LaGrange County, Indiana

### PROJECT OVERVIEW

Project Description:

The Indiana Department of Transportation proposes to proceed with the SR 5 road improvements between US 20 and School Street in Sections 10, 11, 14 and 15, Township 37 North, Range 8 East, Shipshewana, Newbury Township on the 7.5-minute Shipshewana, Indiana, United States Geological Survey (USGS) topographic map.

The preferred alternative is to apply a preventative maintenance overlay on the existing pavement while widening the roadway to provide a two-way left-turn lane along the 1.44-mile corridor. The proposed pavement section consists of one 14-foot-wide two-way left-turn lane, two 11-foot-wide through lanes, and two 10-foot-wide buggy lanes. Curb and gutter will be added along both sides of the roadway with a graded shelf to the right-of-way line to accommodate future sidewalk construction. Driveways through the project area will be reconstructed as needed. Minor drainage structures, such as pipe culverts, may be newly installed, replaced, and/or removed, as needed, to perpetuate drainage through the project area.

The survey area extends approximately 2.3 km (1.4 mi) along SR 5 and approximately 36.6 m (120 ft) wide at the widest. The project encompasses 6.9 ha (17.2 ac).

INDOT Designation Number/ Contract Number: 1700179 Project Number:

DHPA Number: Approved DHPA Plan Number:

Prepared For: Strand Associates, Inc.

Contact Person: Marc Rape, P.E.

Address: 629 Washington Street

City: Columbus State: IN ZIP Code: 47201

Telephone Number: 812.372.9911 ext. 4310 Email Address: Marc.Rape@strand.com

Principal Investigator: Samuel P. Snell, MS, RPA

Signature:

Company/Institution: Metric Environmental

Visual Inspection: Areas of obvious physical disturbance or greater than 20 percent slope were visually inspected with a walkover at 5-m (16.4-ft) intervals. In some areas, this was generally sufficient to document obvious disturbances such as buried utilities. If grass or other vegetation obscured the ground surface, then it was walked and signs of disturbance (landscaping, utilities, drainage ditches, etc.) were noted. Photographs were taken as appropriate.

Shovel Test Probes (STP): In areas where the ground surface had less than 30 percent visibility, shovel probing was utilized. This method consisted of systematically digging shovel probes every 15-m (49.2-ft) extending at least 5 cm (2.0 in) into the subsoil and screening the excavated soil through 1/4 inch hardware cloth screen. A standard record was kept that includes soil profile, soil texture, soil color (Munsell), and presence/absence of cultural materials.

Soil Cores: Initially in areas where visual inspection suggested potential disturbance, soil cores were advanced to confirm disturbances. Soil cores were advanced in 30 m (98.4 ft) intervals. If intact soils would have been found, then shovel probes would have been dug at that location. No soil cores were advanced in areas with obvious disturbance.

Pedestrian Survey: In areas where the ground surface had at least 30 percent surface visibility and well weathered surface conditions, generally within tilled agricultural fields, pedestrian survey was utilized. No-till areas are excluded from this survey method. The area is examined via pedestrian survey, with transects spaced at no more than 5-m (16.4-ft) intervals.

Describe Methods:

*Attach photographs documenting disturbances below*

Describe Disturbances:

Disturbances were caused by underground utilities, storm drains, road grade, sidewalk construction, roadside ditch, parking lots, driveways, and landscaping.

Comments:

### Results

- Archaeological records check has determined that the project area does not have the potential to contain archaeological resources.
- Archaeological records check has determined that the project area has the potential to contain archaeological resources.
- Phase Ia reconnaissance has located no archaeological resources in the project area.
- Phase Ia reconnaissance has identified landforms conducive to buried archaeological deposits.

Actual Area Surveyed hectares:  acres:

Because finalized construction design plans were not available, an area larger than the anticipated project construction footprint was surveyed to facilitate any reasonable construction design plan changes. The survey area extends approximately 2.3 km (1.4 mi) along SR 5 and approximately 36.6 m (120 ft) wide at the widest. The project encompasses 6.9 ha (17.2 ac) [Figure 1-8].

Although a majority of the survey area had been previously surveyed by Klabacka (2008), the 2008 guidelines were not used and everything except the pastures were resurveyed. The pastures were skipped as they would have been covered in the original survey and to reduce the potential impact to the livestock. The entire survey area was visually inspected (Figures 9-34). The majority of the survey had been disturbed by underground utilities, storm drains, road grade, sidewalk construction, roadside ditch, parking lots, driveways, and landscaping (Figures 9-29). There were two areas of pedestrian survey. One was an agricultural field on the west side of SR 5 at the intersection of Farver Street and the other was a large family garden 80 m (262.5 ft) north of the intersection of SR 5 and Berkshire Street on the west side of SR 5. Both areas had 50-70 percent visibility. One transect was walked in each area on the edge of the cultivated area.

Comments:

Twenty soil cores were advanced to confirm disturbance in areas where disturbance wasn't obvious. Three cores were hydric and four were eroded with a sod layer and then subsoil. The others all had a similar profiles of a mixed very dark grayish brown (10YR 3/2) loam with gravels and yellowish brown (10YR 5/6) sandy loam extending 10-30 cm (3.9-11.8 in) underlain by a yellowish brown (10YR 5/6) sandy loam.

Twenty three STPs were attempted. Four were disturbed and five were not dug because they fell in a driveway or a landscape features. The disturbed STPs had similar profiles of a mixed very dark grayish brown (10YR 3/2) loam extending 10-12 cm (3.9-4.7 in) underlain by a mixed brown (10YR 5/3) and very dark grayish brown (10YR 3/2) loam with gravels loam extending 25-40 cm (9.8-15.7 in) underlain by a grayish brown (10YR 5/2) sandy loam with mineral stains. Transect 1 Probes 1 and 2 had a similar profile of a very dark grayish brown (10YR 3/2) loam extending 10-30 cm (3.9- 11.8 in) underlain by a grayish brown (10YR 5/2) clayey sand with mineral stains. All of the other STPs had a similar profile of a dark brown (10YR 3/3) loam extending 20-45 cm (7.9- 17.7 in) underlain by a yellowish brown (10YR 5/6) sand.

No archaeological sites were located during the survey and no further archaeological work is recommend for this project.

### Recommendation

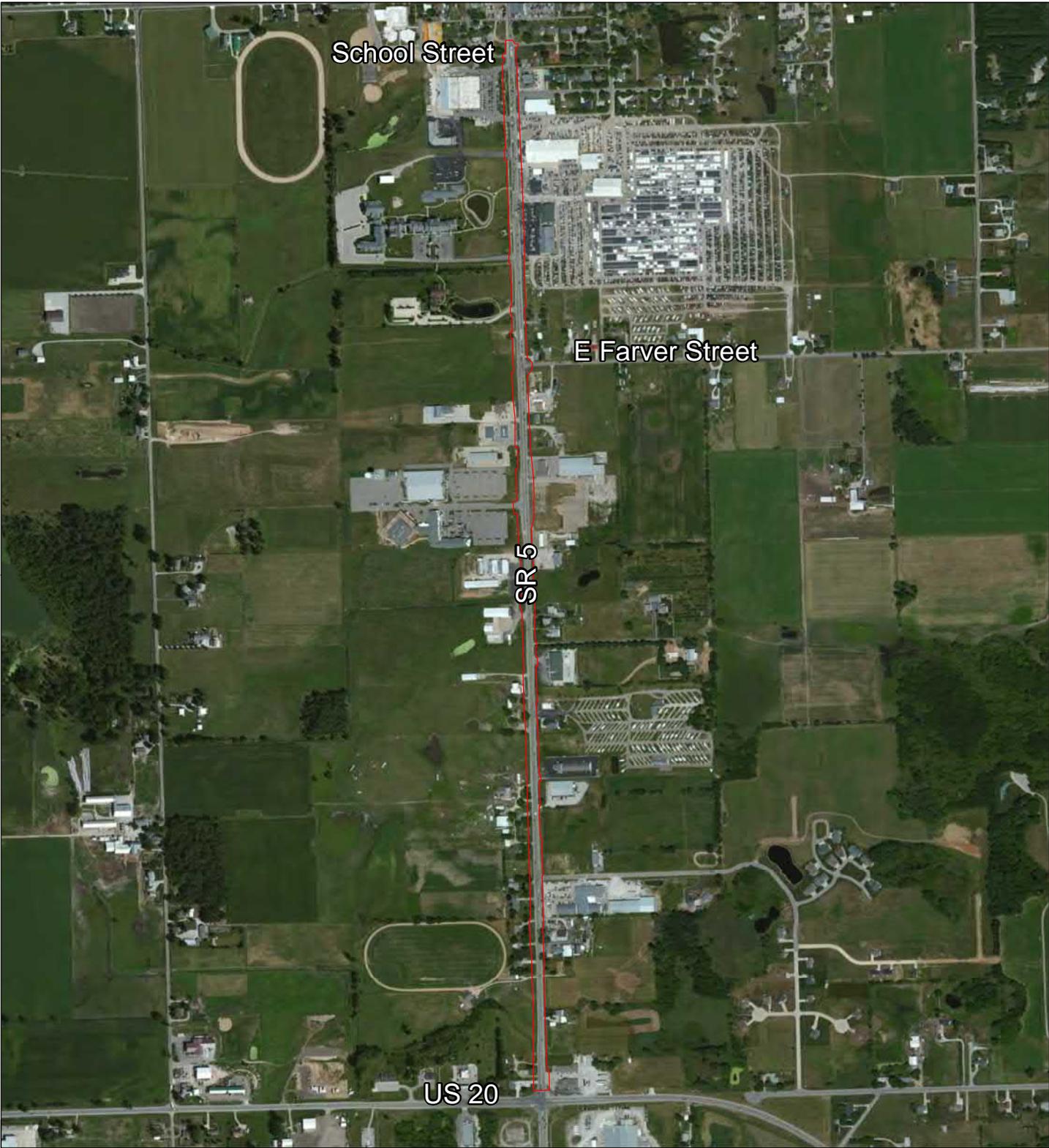
- The archaeological records check has determined that the project area has the potential to contain archaeological resources and a Phase Ia archaeological reconnaissance is recommended.
- The archaeological records check has determined that the project area does not have the potential to contain archaeological resources and no further work is recommended before the project is allowed to proceed.
- The Phase Ia archaeological reconnaissance has located no archaeological sites within the project area and it is recommended that the project be allowed to proceed as planned.
- The Phase Ia archaeological reconnaissance has determined that the project area includes landforms which have the potential to contain buried archaeological deposits. It is recommended that Phase Ic archaeological subsurface reconnaissance be conducted before the project is allowed to proceed.
- The Phase Ia archaeological reconnaissance has determined that the project area is within 100 feet of a cemetery and a Cemetery Development Plan is required per IC-14-21-1-26.5.

Cemetery Name: N/A

Other Recommendations/Commitments:

In the unlikely event that archaeological deposits or human remains are encountered during the construction phase of the project, all work must cease and archaeologists from the DHPA and the INDOT-CRO must be notified.

**Pursuant to IC-14-21-1, if any archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and 29) requires that the discovery must be reported to the Department of Natural Resources within two (2) business days. In that event, please call (317) 232-1646.**



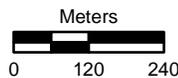
□ Survey Area

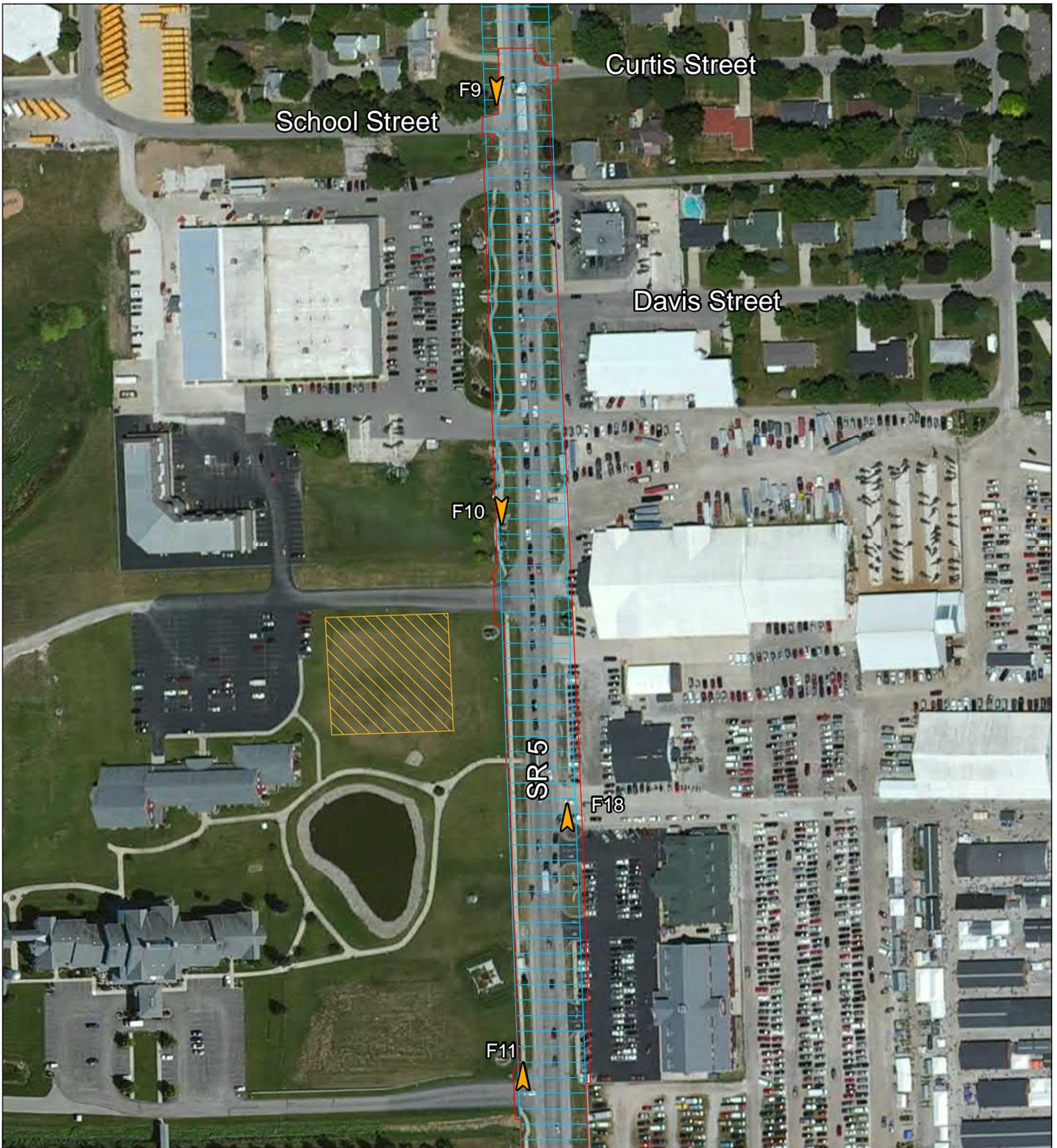
Figure 3. Project area on an aerial photograph  
 SR 5 from US 20 to School Street  
 Road Improvement Project  
 Newbury Township, LaGrange County, Indiana  
 Des. No. 1700179  
 Metric Project No.18-0046-14  
 Map Date: 05/11/2020

All Locations Approximate  
 2013 Basemap  
 Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar  
 Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and  
 the GIS User Community



1 cm = 120 m





- ▭ Survey Area
- ▨ New Construction
- ▭ Previously Surveyed Klabacka (2008)

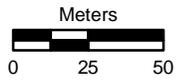
▼ Photograph Location

Figure 4. Survey area details on an aerial photograph  
 SR 5 from US 20 to School Street  
 Road Improvement Project  
 Newbury Township, LaGrange County, Indiana  
 Des. No. 1700179  
 Metric Project No.18-0046-14  
 Map Date: 05/11/2020

All Locations Approximate 2013 Basemap  
 Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



1 cm = 25 m





- Survey Area
- ▨ New Construction
- ▨ Previously Surveyed Klabacka (2008)
- ▨ Previously Surveyed Waters (2001)
- Photograph Location
- ★ Disturbed Soil Core
- ★ Hydric Soil Core

Figure 5. Survey area details on an aerial photograph  
 SR 5 from US 20 to School Street  
 Road Improvement Project  
 Newbury Township, LaGrange County, Indiana  
 Des. No. 1700179  
 Metric Project No.18-0046-14  
 Map Date: 05/11/2020

All Locations Approximate  
 2013 Basemap  
 Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar  
 Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and  
 the GIS User Community

N

1 cm = 25 m

Meters  
 0 25 50





- Survey Area
- ▭ Previously Surveyed Klabacka (2008)
- ▴ Photograph Location
- ★ Disturbed Soil Core
- ★ Eroded Soil Core
- ▭ Previously Surveyed Waters (2001)
- Slope
- Slope and Ditch

Figure 6. Survey area details on an aerial photograph  
 SR 5 from US 20 to School Street  
 Road Improvement Project  
 Newbury Township, LaGrange County, Indiana  
 Des. No. 1700179  
 Metric Project No.18-0046-14  
 Map Date: 05/21/2020

All Locations Approximate  
 2013 Basemap  
 Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

N

1 cm = 25 m

Meters  
 0    25    50





- |                                     |                     |                               |
|-------------------------------------|---------------------|-------------------------------|
| Survey Area                         | Photograph Location | Negative STP                  |
| New Construction                    | Disturbed Soil Core | Disturbed STP                 |
| Previously Surveyed Klabacka (2008) | Eroded Soil Core    | Driveway or Landscape Feature |

Figure 7. Survey area details on an aerial photograph  
 SR 5 from US 20 to School Street  
 Road Improvement Project  
 Newbury Township, LaGrange County, Indiana  
 Des. No. 1700179  
 Metric Project No.18-0046-14  
 Map Date: 05/11/2020

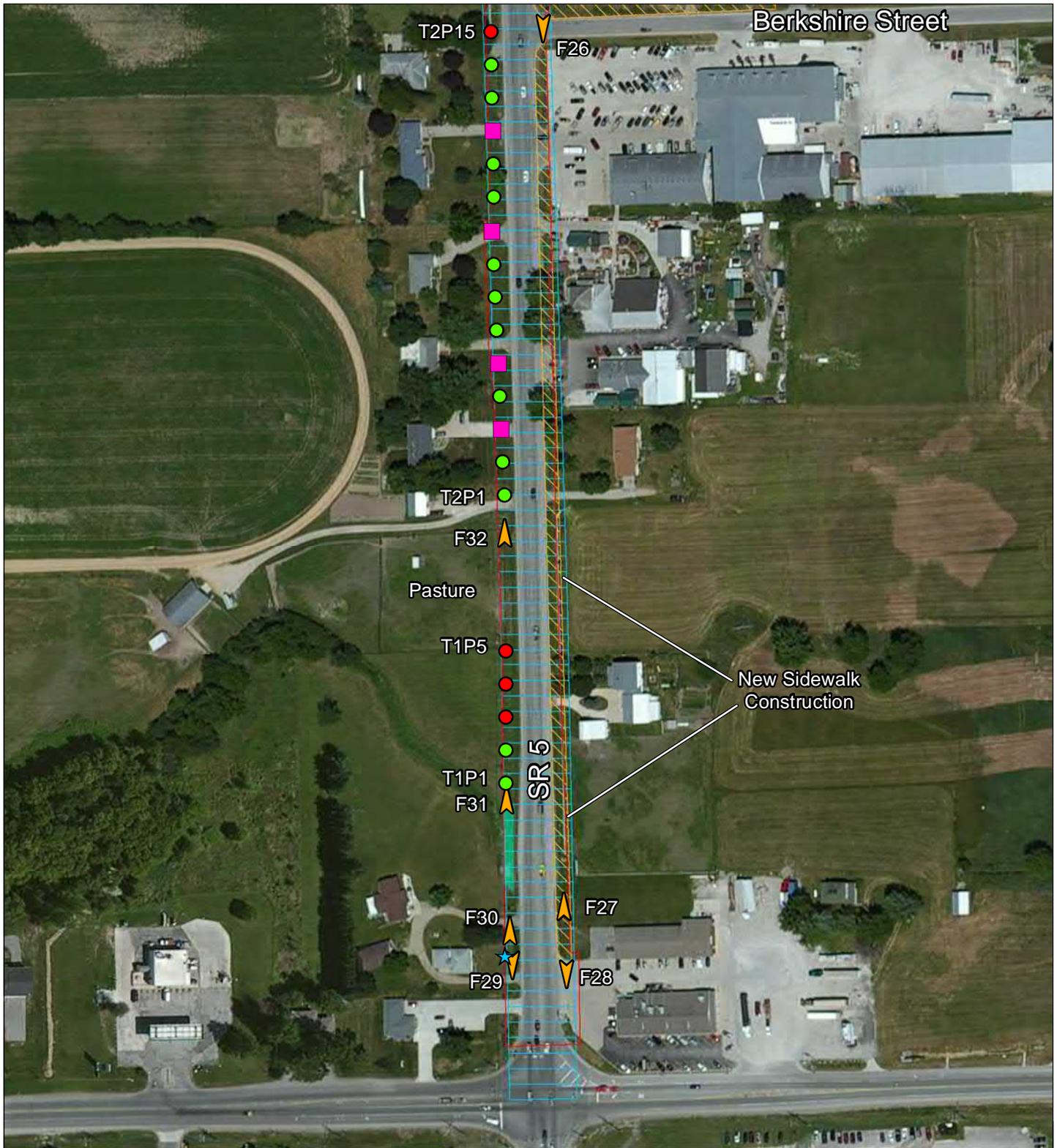
All Locations Approximate  
 2013 Basemap  
 Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar  
 Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and  
 the GIS User Community

N

1 cm = 25 m

Meters  
 0 25 50





Survey Area	Photograph Location	Disturbed STP
New Construction	Cotton Lake Ditch Bed and Bank	Driveway or Landscape Feature
Previously Surveyed Klabacka (2008)	Negative STP	Hydric Soil Core

Figure 8. Survey area details on an aerial photograph  
 SR 5 from US 20 to School Street  
 Road Improvement Project  
 Newbury Township, LaGrange County, Indiana  
 Des. No. 1700179  
 Metric Project No.18-0046-14  
 Map Date: 05/21/2020

All Locations Approximate  
 2013 Basemap

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

N

1 cm = 25 m

Meters  
 0 25 50



# **APPENDIX E: Red Flag and Hazardous Materials**



# INDIANA DEPARTMENT OF TRANSPORTATION

100 North Senate Avenue  
Room N642  
Indianapolis, Indiana 46204

PHONE: (317) 232-5113  
FAX: (317) 233-4929

**Eric Holcomb, Governor**  
**Joe McGuinness,**  
**Commissioner**

Date: August 31, 2020

To: Site Assessment & Management  
Environmental Policy Office - Environmental Services Division (ESD)  
Indiana Department of Transportation  
100 N Senate Avenue, Room N642  
Indianapolis, IN 46204

From: Colin Keith  
Metric Environmental, LLC  
6971 Hillside Court  
Indianapolis, IN 46250  
[colink@metricenv.com](mailto:colink@metricenv.com)

Re: RED FLAG INVESTIGATION ADDENDUM  
DES #1700179, State Project  
Road Improvements, Two-Way Left Turn Lane (TWLTL)  
State Road (SR) 5, from US 20 to School Street  
Shipshewana, Newbury Township, LaGrange County, Indiana

A review of the original RFI, prepared on April 1, 2019 and signed on July 23, 2019, for the above-referenced project indicated substantive changes have occurred within the 0.5 mile radius and/or project area limits that will have an impact to the project. Since completion of the original RFI, the right-of-way (R/W) amounts have increased from no permanent R/W and less than 2.0 acres temporary R/W to approximately 2.25 to 3 acres of permanent R/W and approximately 0.5 to 1 acre temporary R/W, based on the latest design plans. Work on two culverts located within the project area has also been added to the scope. The casting on the east side of CV 005-044-92.32 will be raised. Two manholes and a pipe will be installed at the west side of CV 005-044-91.27. Grading of adjacent lawns will be required. Adjacent driveways will be reconstructed. Potential midblock pedestrian crossings with pedestrian refuges are being considered at two locations on SR 5, approximately 0.33 mile north of US 20 and approximately 0.15 mile north of Farver Street. Traffic will be maintained through the project area using lane shifts and phased construction.

The following features and/or items were not detailed in the original RFI but have since been identified as having an impact on the project area and requiring additional coordination.

## **Hazardous Material Concerns**

NPDES Facilities: Five new NPDES facility listings are present within the 0.5 mile search radius when compared to the original RFI. Two of the new facilities are located within or adjacent to the project area and are discussed further.

- South SR 5 Infrastructure Improvements (SR 5 and Berkshire Dr, Permit #INRA02931) is located within the project area, approximately 0.13 mile north of the southern project terminus. The facility is municipally owned and has an active permit that expires in February 2024. Coordination with the Town of Shipshewana will occur.

- Russ Yoder, All in Properties – Commercial Center (US 20 and SR 5, Permit #INRA03568) is located immediately southwest of the southern project terminus. The facility is privately owned and has an active permit that expires in April 2024. Coordination with All in Properties will occur.

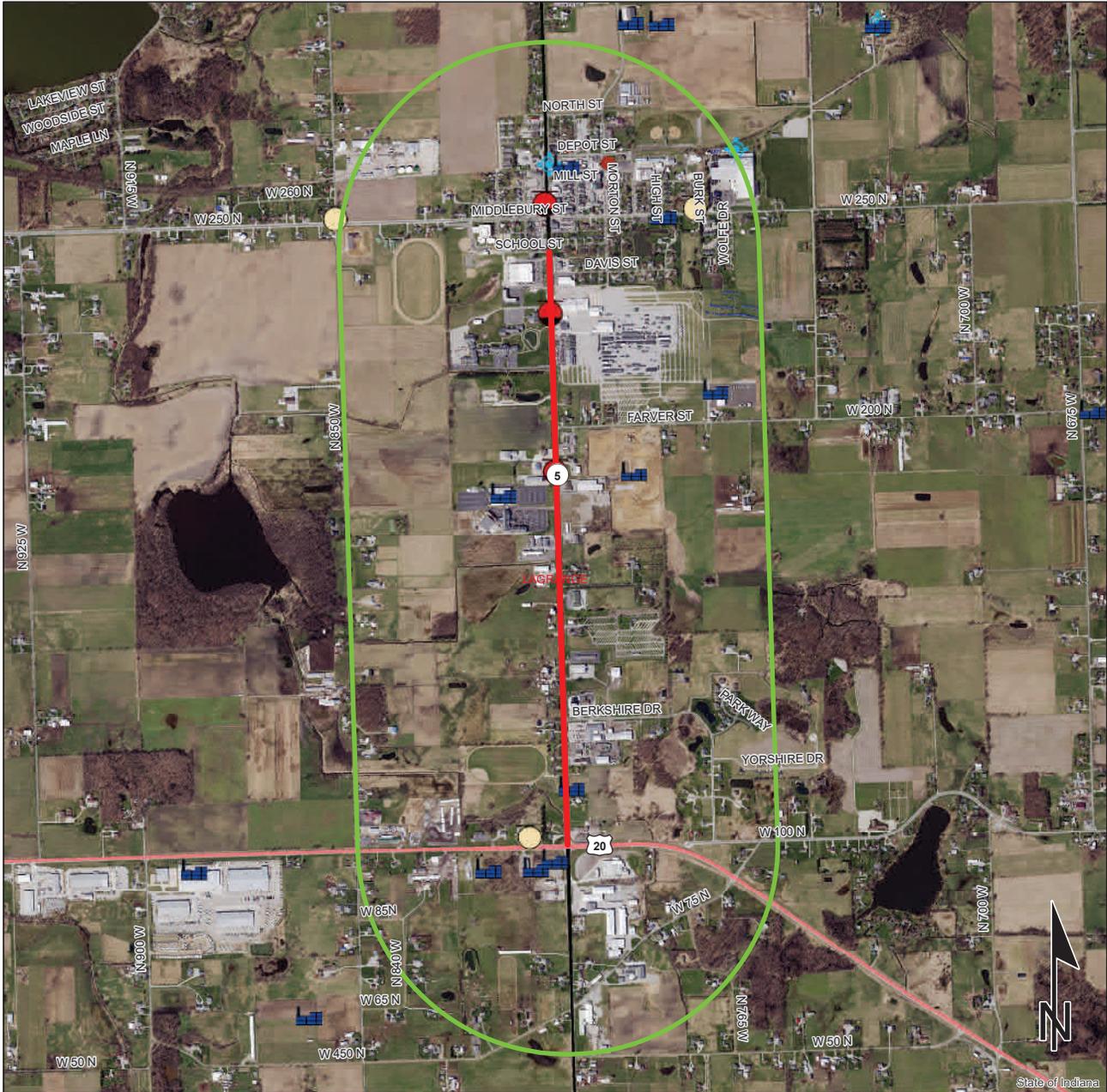
**Ecological Information**

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The project area is located in a primarily commercial/industrial area. The October 10, 2019 inspection reports for Culverts CV 005-044-91.27 and CV 005-044-92.32 both state that no evidence of bats was seen or heard in the culverts. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to the most recent "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

INDOT ESD concurrence: Nicole Fohey-Breting Digitally signed by Nicole Fohey-Breting Date: 2020.09.02 09:34:40 -04'00' (Signature)

Prepared by:  
Colin Keith  
Project Scientist  
Metric Environmental, LLC

RFI Addendum - Hazardous Material Concerns  
 SR 5 from US 20 to School Street  
 Des. No. 1700179, Roadway Improvement  
 LaGrange County, Indiana



	Brownfield		RCRA Generator/TSD		Institutional Controls
	RCRA Corrective Action Sites		Restricted Waste Site		County Boundary
	Confined Feeding Operation Notice_of_Contamination		Septage Waste Site		Project Area
	Construction/Demolition Site		Solid Waste Landfill		Half Mile Radius
	Infectious/Medical Waste Site		State Cleanup Site		Toll
	Leaking Underground Storage Tank		Superfund		Interstate
	Manufactured Gas Plant		Tire Waste Site		State Route
	NPDES Facilities		Underground Storage Tank		US Route
	NPDES Pipe Locations		Voluntary Remediation Program		Local Road
	Open Dump Waste Site		Waste Transfer Station		



This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

**Sources:**  
**Non Orthophotography**  
 Data - Obtained from the State of Indiana Geographical Information Office Library  
**Orthophotography** - Obtained from Indiana Map Framework Data ([www.indianamap.org](http://www.indianamap.org))  
 Map Projection: UTM Zone 16 N Map Datum: NAD83



# INDIANA DEPARTMENT OF TRANSPORTATION

*Driving Indiana's Economic Growth*

100 North Senate Avenue  
Room N642  
Indianapolis, Indiana 46204-2216 (317) 232-5348 FAX: (317) 233-4929

**Eric Holcomb, Governor**  
**Joe McGuinness, Commissioner**

Date: April 1, 2019

To: Site Assessment & Management  
Environmental Policy Office - Environmental Services Division  
Indiana Department of Transportation  
100 N Senate Avenue, Room N642  
Indianapolis, IN 46204

From: Ryan Hennessey  
Metric Environmental, LLC  
6971 Hillside Court  
Indianapolis, IN 46250  
RyanH@MetricEnv.com

Re: RED FLAG INVESTIGATION  
DES #1700179, State Project  
Road Improvements, Two-Way Left Turn Lane (TWLTL)  
State Road (SR) 5, from United States (US) 20 to School Street  
Shipshewana, Newbury Township, LaGrange County, Indiana

## PROJECT DESCRIPTION

Brief Description of Project: Indiana Department of Transportation (INDOT) and Federal Highway Administration (FHWA) propose to utilize federal funds to improve SR 5. The project extends approximately 1.40 miles north along SR 5, from US 20 to School Street, Designation Number (Des. No.) 1700179. Specifically, the project is located in Sections 10, 14, 15, and 22, of Township 37 North, Range 8 East of the Shipshewana, Indiana 7.5-minute United States Geological Survey (USGS) topographic quadrangle. The proposed scope of work is to add a TWLTL between northbound and southbound through lanes. Pedestrian sidewalks and storm sewers will be installed east and west of the road.

Bridge and/or Culvert Project: Yes  No  Structure # \_\_\_\_\_

If this is a bridge project, is the bridge Historical? Yes  No  , Select  Non-Select

(Note: If the project involves a historical bridge, please include the bridge information in the Recommendations Section of the report).

Proposed right of way: Temporary  # Acres ≤2.00 Permanent  # Acres N/A

Type of excavation: Excavation will be necessary for the addition of new storm sewers installed on both sides of SR 5 through the entire length of the project. Depth of excavation will be approximately 5 ft.

Maintenance of traffic: During construction, maintenance of traffic will likely consist of merging the motorized vehicle lane with the buggy lane for each direction.

Work in waterway: Yes  No  Above ordinary high water mark: Yes  No

State Project:  LPA:

Any other factors influencing recommendations: N/A

### **INFRASTRUCTURE TABLE AND SUMMARY**

<b>Infrastructure</b>			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Religious Facilities	<b>1</b>	Recreational Facilities	<b>3</b>
Airports <sup>1</sup>	<b>N/A</b>	Pipelines	<b>3</b>
Cemeteries	<b>N/A</b>	Railroads	<b>1</b>
Hospitals	<b>N/A</b>	Trails	<b>2</b>
Schools	<b>1</b>	Managed Lands	<b>1</b>

<sup>1</sup>In order to complete the required airport review, a review of public airports within 3.8 miles (20,000 feet) is required.

**Religious Facilities:** Although not mapped in the Indiana GIO Database, one (1) religious facility is located within the 0.5-mile search radius. The facility, United Methodist Church, is located approximately 0.20-mile east of the northern segment of the project area. No impact is expected.

**Schools:** Although not mapped in the Indiana GIO Database, one (1) school is located within the 0.5-mile search radius. Shippshewana-Scott Elementary School is located approximately 0.12-mile west of the northern segment of the project area. No impact is expected.

**Recreational Facilities:** Three (3) recreational facilities are located within the 0.5-mile search radius. The nearest facility, Shippshewana Campground South, is adjacent to the southern segment of the project area. Coordination with Shippshewana Campground South will occur.

**Pipelines:** Three (3) pipeline segments are located within the 0.5-mile search radius. The nearest pipeline is located approximately 0.10-mile west of the project area. No impact is expected.

**Railroads:** One (1) railroad is located within the 0.5-mile search radius. The feature is located approximately 0.19-mile north of the northern segment of the project area. No impact is expected.

**Trails:** Two (2) trail segments are located within the 0.5-mile search radius. The nearest segment is located approximately 0.19-mile north of the northern segment of the project area. No impact is expected.

**Managed Lands:** One (1) managed land is located within the 0.5-mile search radius. The feature, North Park, is located approximately 0.31-mile northeast of the northern segment of the project area. No impact is expected.

## WATER RESOURCES TABLE AND SUMMARY

<b>Water Resources</b>			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
NWI - Points	<b>N/A</b>	Canal Routes - Historic	<b>N/A</b>
Karst Springs	<b>N/A</b>	NWI - Wetlands	<b>40</b>
Canal Structures – Historic	<b>N/A</b>	Lakes	<b>13</b>
NPS NRI Listed	<b>N/A</b>	Floodplain - DFIRM	<b>N/A</b>
NWI-Lines	<b>2</b>	Cave Entrance Density	<b>N/A</b>
IDEM 303d Listed Streams and Lakes (Impaired)	<b>2</b>	Sinkhole Areas	<b>N/A</b>
Rivers and Streams	<b>2</b>	Sinking-Stream Basins	<b>N/A</b>

NWI-Lines: Two (2) NWI-Lines are located within the 0.5-mile search radius. The nearest NWI-Line is located approximately 0.12-mile southeast of the project area. No impact is expected.

IDEM 303d Listed Streams and Lakes (Impaired): Two (2) impaired stream and lake segments are located within the 0.5-mile search radius. Cotton Lake Ditch is located within the southern segment of the project area. Cotton Lake Ditch is listed as impaired for E. coli and Impaired Biotic Communities (IBC). Workers who are working in or near water with E. coli should take care to wear appropriate personal protective equipment (PPE), observe proper hygiene procedures, including regular hand washing, and limit personal exposure. Coordination with INDOT ES Ecology and Waterway Permitting should occur.

Rivers and Streams: Two (2) river and stream segments are located within the 0.5-mile search radius. Cotton Lake Ditch is located within the southern segment of the project area. A Waters of the US Report will be prepared and coordination with INDOT ES Ecology and Waterway Permitting will occur.

NWI – Wetlands: Forty (40) NWI Wetlands are located within the 0.5-mile search radius. The nearest wetland is located approximately 0.02-mile west of the northern segment of the project area. No impact is expected.

Lakes: Thirteen (13) lakes are located within the 0.5-mile search radius. The nearest lake feature is located approximately 0.03-mile east of the southern segment of the project area. No impact is expected.

## URBANIZED AREA BOUNDARY SUMMARY

N/A

## MINING AND MINERAL EXPLORATION TABLE AND SUMMARY

<b>Mining/Mineral Exploration</b>			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Petroleum Wells	<b>N/A</b>	Mineral Resources	<b>N/A</b>
Mines – Surface	<b>N/A</b>	Mines – Underground	<b>N/A</b>

Explanation: No mining and mineral exploration resources were identified within the 0.5-mile search radius.

## HAZARDOUS MATERIAL CONCERNS TABLE AND SUMMARY

<b>Hazardous Material Concerns</b>			
Indicate the number of items of concern found within the 0.5 mile search radius. If there are no items, please indicate N/A:			
Superfund	N/A	Manufactured Gas Plant Sites	N/A
RCRA Generator/ TSD	N/A	Open Dump Waste Sites	N/A
RCRA Corrective Action Sites	N/A	Restricted Waste Sites	N/A
State Cleanup Sites	N/A	Waste Transfer Stations	N/A
Septage Waste Sites	N/A	Tire Waste Sites	N/A
Underground Storage Tank (UST) Sites	2	Confined Feeding Operations (CFO)	N/A
Voluntary Remediation Program	N/A	Brownfields	N/A
Construction Demolition Waste	N/A	Institutional Controls	N/A
Solid Waste Landfill	N/A	NPDES Facilities	4
Infectious/Medical Waste Sites	N/A	NPDES Pipe Locations	N/A
Leaking Underground Storage (LUST) Sites	3	Notice of Contamination Sites	N/A

Underground Storage Tank (UST) Sites: Two (2) UST sites are located within the 0.5-mile search radius. One (1) UST site is discussed below:

- The Landing - BP (AI ID#: 44306, Regulatory ID#: 18719) is located approximately 0.08-mile west of the southern segment of the project area at 8095 West US 20. According to the most recent inspection report, dated June 17, 2016, the site contains three (3) Gasoline USTs in capacities of 10,000 gallons (gal.), 6,000 gal., and 8,000 gal., one (1) 4,000 gal. kerosene UST, and one (1) 12,000 gal. diesel UST for a total of 5 USTs. All USTs are currently in use and are in compliance with Indiana's UST Rule 329 IAC 9. No impact is expected.

Leaking Underground Storage Tank (LUST) Sites: Three (3) LUST sites are located within the 0.5-mile search radius. The three (3) LUST sites are adjacent to the project area and are discussed below:

- Holly Park Homes (AI ID#: 40786, Regulatory ID#: 4457) is located adjacent to the project area at 370 South Van Buren Street. According to the Site Investigation Report, dated June 1, 1995, one (1) 4,000-gallon UST and one (1) 12,000-gallon UST were removed from the site in September of 1990 and soil and groundwater samples were obtained at the site. The samples indicated that the soil and groundwater contained total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene and xylene (BTEX). In a letter dated July 14, 1997, Indiana Department of Environmental Management (IDEM) issued a No further Action (NFA) determination for the site. No impact is expected.
- Former Gas America 208 (AI ID#: 46847, Regulatory ID#: 24944) is located adjacent to the project area at 720 South Van Buren Street. There is no information regarding any LUST Program documentation available on the IDEM Virtual File Cabinet (VFC) and the site is now a Phillips 66 filling station. According to the UST inspection report dated February 9, 2017, there are currently six (6) USTs at the site. All USTs at the site meet the requirements set forth in Indiana's UST Rule 329 IAC 9. No impact is expected.

- Yoder Mart Express 6 (AI ID#: 41603, Regulatory ID#: 15255) is located approximately 0.09-mile north of the northern segment of the project area at 120 North Van Buren Street. According to the Site Closure letter dated October 15, 2010, an NFA determination has been issued to the site. Contamination below the Risk Integrated System of Closure (RISC) industrial levels are present in the soil and groundwater. No impact is expected.

NPDES Facilities: Four (4) NPDES facilities are located within the 0.5-mile search radius. The nearest facility, Southwest Corner 5 & 20 (Permit #: INR10P352) is located at the intersection of SR 5 and US 20, approximately 0.07 miles southwest of the southern segment of the project area. No impact is expected.

### **ECOLOGICAL INFORMATION SUMMARY**

The Elkhart County listing of the Indiana Natural Heritage Data Center information on endangered, threatened, or rare (ETR) species and high quality natural communities is attached with ETR species highlighted. A preliminary review of the Indiana Natural Heritage Database by INDOT Environmental Services did not indicate the presence of endangered species. Coordination with and IDNR will occur.

Due to the nature of project activities, this project will fall under the guidelines set forth under USFWS Interim Policy for the Review of Highway Transportation Projects in Indiana dated May 29, 2013. No further coordination is necessary.

A review of the USFWS database did not indicate the presence of endangered bat species in or within 0.5 mile of the project area. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to "Using the USFWS's Information for Planning and Consultation (IPaC) System for Listed Bat Consultation for INDOT Projects".

An inquiry using the USFWS IPaC website did not indicate the presence of the federally endangered species, the Rusty Patched Bumble Bee, in or within 0.5 mile of the project area. No impact is expected.

### **RECOMMENDATIONS SECTION**

#### **INFRASTRUCTURE:**

Recreational Facilities: Shipshewana Campground South is located adjacent to the southern segment of the project area. Coordination with Shipshewana Campground South will occur.

#### **WATER RESOURCES:**

Rivers and Streams: Cotton Lake Ditch, an impaired stream for E.coli, runs through the southern segment of the project area. A Waters of the US Report will be prepared and coordination with INDOT ES Ecology and Waterway Permitting will occur.

IDEM 303d Listed Streams and Lakes (Impaired): Cotton Lake Ditch is located within the southern segment of the project area. Cotton Lake Ditch is listed as impaired for E. coli and IBC. Workers who are working in or near water with E. coli should take care to wear appropriate PPE, observe proper hygiene procedures, including regular hand washing, and limit personal exposure. Coordination with INDOT ES Ecology and Waterway Permitting should occur.

**URBANIZED AREA BOUNDARY: N/A**

**MINING/MINERAL EXPLORATION: N/A**

**HAZMAT CONCERNS: N/A**

ECOLOGICAL INFORMATION: Coordination with IDNR will occur. The range-wide programmatic consultation for the Indiana Bat and Northern Long-eared Bat will be completed according to "Using the USFWS's IPaC System for Listed Bat Consultation for INDOT Projects".

INDOT Environmental Services concurrence: Nicole Fohey-Breting (Signature)

July 23, 2019

Prepared by:  
Ryan Hennessey  
Environmental Geologist  
Metric Environmental, LLC

**Graphics:**

SITE LOCATION: YES

INFRASTRUCTURE: YES

WATER RESOURCES: YES

URBANIZED AREA BOUNDARY: N/A

MINING/MINERAL EXPLORATION: N/A

HAZMAT CONCERNS: YES

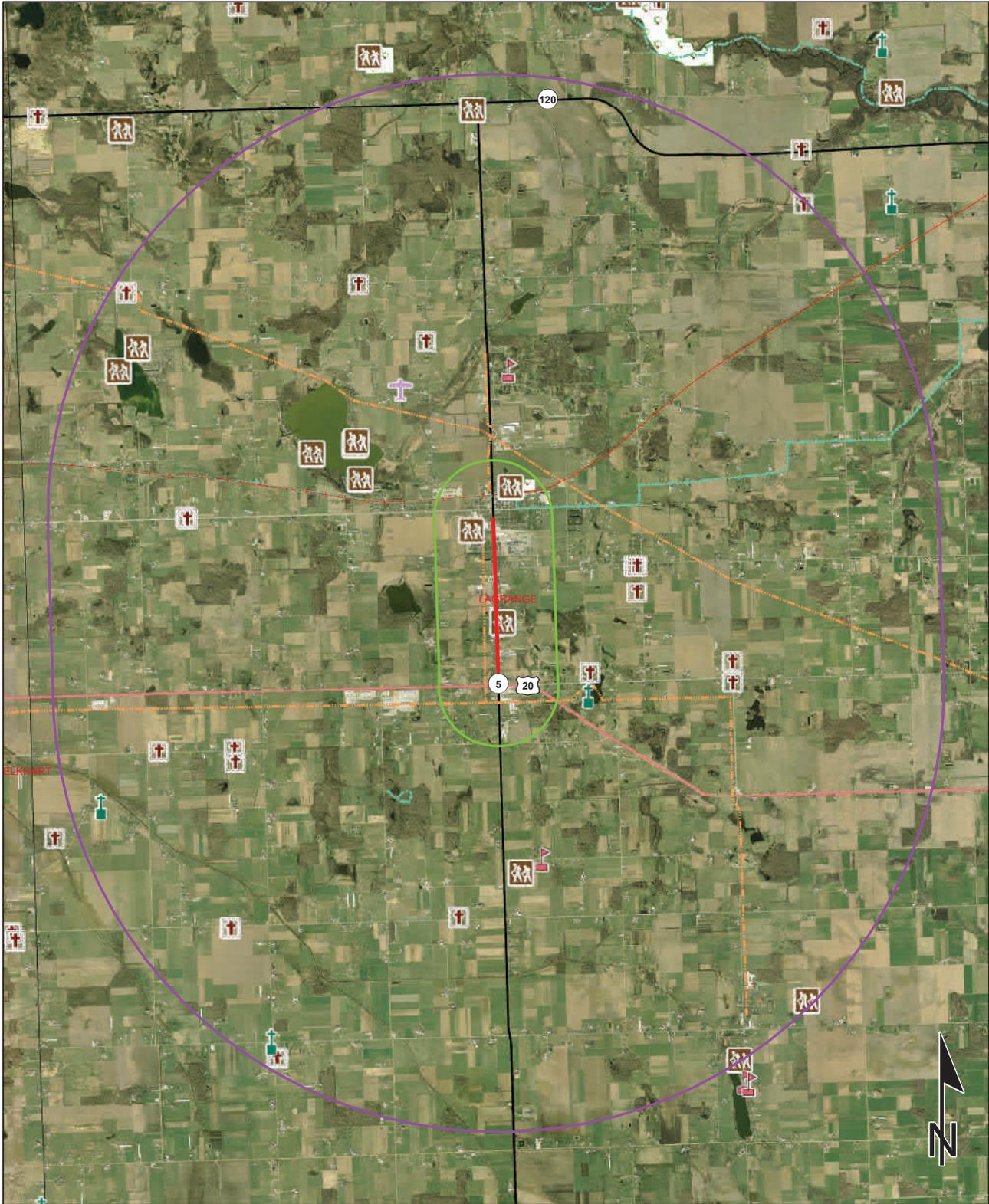
Red Flag Investigation - Site Location  
 SR 5, from US 20 to School Street  
 Des. No. 1700179, Intersection Improvement, (TWLTL)  
 Newbury Township, LaGrange County, Indiana



Sources: 0.65 0.325 0 0.65 Miles  
**Non Orthophotography Data** - Obtained from the State of Indiana Geographical Information Office Library  
**Orthophotography** - Obtained from Indiana Map Framework Data ([www.indianamap.org](http://www.indianamap.org))  
**Map Projection:** UTM Zone 16 N **Map Datum:** NAD83  
 This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

**SHPSHEWANA QUADRANGLE**  
**INDIANA**  
**7.5 MINUTE SERIES**  
**(TOPOGRAPHIC)**

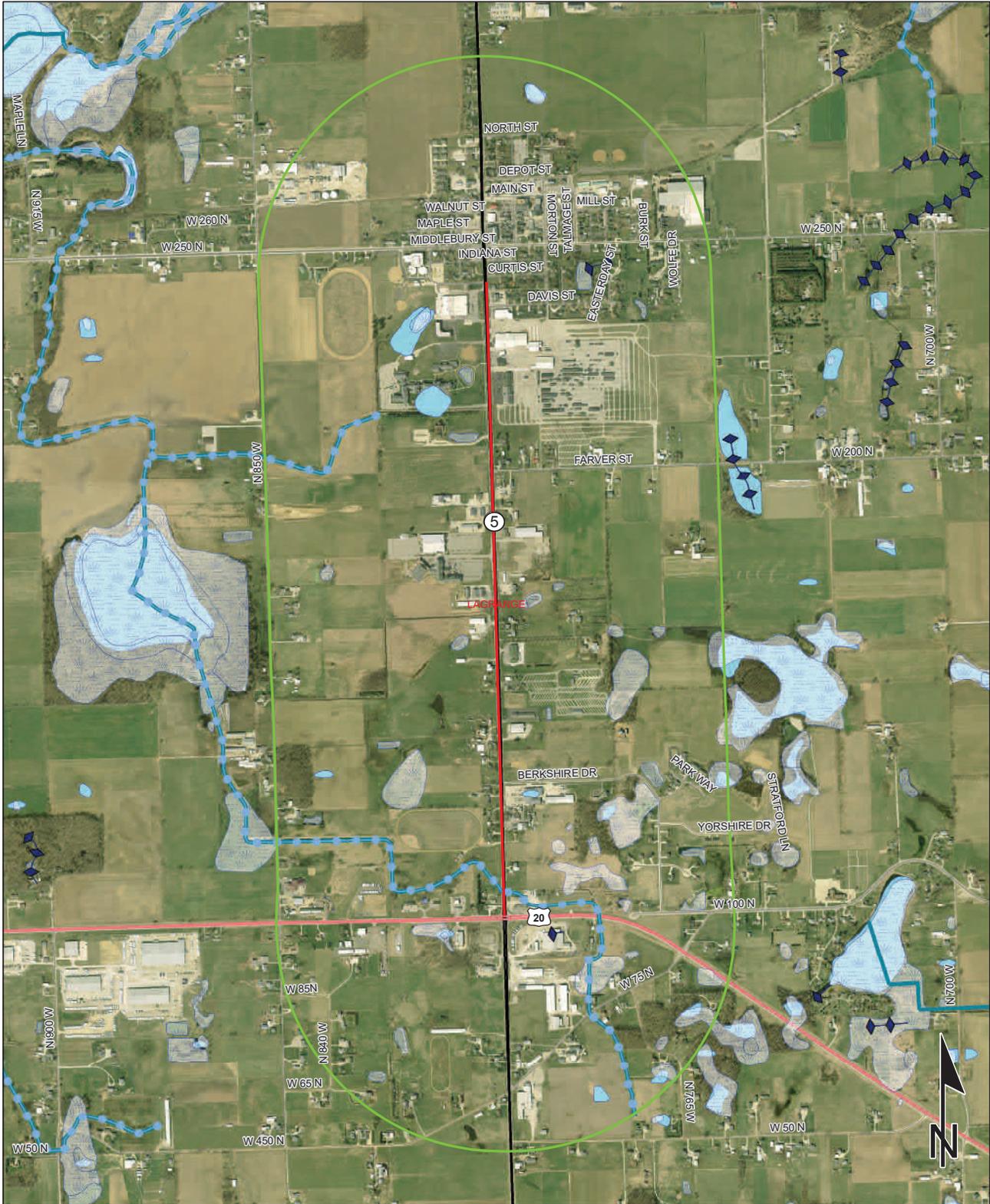
Red Flag Investigation - Infrastructure  
 SR 5, from US 20 to School Street  
 Des. No. 1700179, Intersection Improvement, (TWLTL)  
 Newbury Township, LaGrange County, Indiana



Sources: 1 0.5 0 1 Miles  
**Non Orthophotography**  
 Data - Obtained from the State of Indiana Geographical Information Office Library  
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	Religious Facility		Recreation Facility		Project Area
	Airport		Pipeline		Half Mile Radius
	Cemeteries		Railroad		Toll
	Hospital		Trails		Interstate
	School		Managed Lands		State Route
			County Boundary		US Route
					Local Road

Red Flag Investigation - Water Resources  
 SR 5, from US 20 to School Street  
 Des. No. 1700179, Intersection Improvement, (TWLTL)  
 Newbury Township, LaGrange County, Indiana



**Sources:** 0.25 0.125 0 0.25 Miles  
**Non Orthophotography**  
**Data** - Obtained from the State of Indiana Geographical Information Office Library  
**Orthophotography** - Obtained from Indiana Map Framework Data ([www.indianamap.org](http://www.indianamap.org))  
**Map Projection:** UTM Zone 16 N **Map Datum:** NAD83  
 This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

NWI - Point	Wetlands	Project Area
Karst Spring	Lake	Half Mile Radius
NWI- Line	Floodplain - DFIRM	Toll
Impaired_Stream_Lake	Cave Entrance Density	Interstate
NPS NRI listed	Sinkhole Area	State Route
River	Sinking-Stream Basin	US Route
Canal Structure - Historic	County Boundary	Local Road
Canal Route - Historic		



Indiana County Endangered, Threatened and Rare Species List

County: Lagrange

Species Name	Common Name	FED	STATE	GRANK	SRANK
<b>Mollusk: Bivalvia (Mussels)</b>					
<b>Epioblasma triquetra</b>	<b>Snuffbox</b>	<b>LE</b>	<b>SE</b>	<b>G3</b>	<b>S1</b>
Venustaconcha ellipsiformis	Ellipse		SSC	G4	S2
<b>Villosa fabalis</b>	<b>Rayed Bean</b>	<b>LE</b>	<b>SE</b>	<b>G2</b>	<b>S1</b>
<b>Insect: Homoptera</b>					
<b>Dorydiella kansana</b>			<b>ST</b>	<b>GNR</b>	<b>S1</b>
<b>Prairiana kansana</b>	<b>The Kansas Prairie Leafhopper</b>		<b>SE</b>	<b>GNR</b>	<b>S1S2</b>
<b>Insect: Lepidoptera (Butterflies &amp; Moths)</b>					
<b>Anepia capsularis</b>	<b>The Starry Campion Capsule Moth</b>		<b>SR</b>	<b>G5</b>	<b>S1S2</b>
<b>Apamea verbascoides</b>	<b>The Boreal Apamea</b>		<b>ST</b>	<b>G5</b>	<b>S1S2</b>
<b>Bellura densa</b>	<b>A Noctuid Moth</b>		<b>ST</b>	<b>G5</b>	<b>S1S2</b>
<b>Boloria selene myrina</b>	<b>Silver-bordered Fritillary</b>		<b>ST</b>	<b>G5T5</b>	<b>S2</b>
<b>Calephelis muticum</b>	<b>Swamp Metalmark</b>		<b>ST</b>	<b>G3</b>	<b>S2</b>
<b>Capis curvata</b>	<b>A Noctuid Moth</b>		<b>ST</b>	<b>G5</b>	<b>S2S3</b>
<b>Catocala praeclara</b>	<b>Praeclara Underwing</b>		<b>SR</b>	<b>G5</b>	<b>S2S3</b>
<b>Chortodes inquinata</b>	<b>Tufted Sedge Moth</b>		<b>ST</b>	<b>GNR</b>	<b>S1S2</b>
<b>Crambus girardellus</b>	<b>Orange-striped Sedge Moth</b>		<b>SR</b>	<b>GNR</b>	<b>S2S3</b>
<b>Cryptocala acadensis</b>	<b>Catocaline Dart</b>		<b>ST</b>	<b>G5</b>	<b>S1S2</b>
<b>Dasychira cinnamomea</b>	<b>A Moth</b>		<b>SR</b>	<b>G4</b>	<b>S1</b>
<b>Euphydryas phaeton</b>	<b>Baltimore</b>		<b>SR</b>	<b>G5</b>	<b>S2</b>
<b>Euphyes bimacula</b>	<b>Two-spotted Skipper</b>		<b>ST</b>	<b>G4</b>	<b>S2</b>
<b>Exyra rolandiana</b>	<b>Pitcher Window Moth</b>		<b>SE</b>	<b>G4</b>	<b>S1S2</b>
<b>Glaucopsyche lygdamus couperi</b>	<b>Silvery Blue</b>		<b>SE</b>	<b>G5T5</b>	<b>S1</b>
<b>Grammia phyllira</b>	<b>The Sand Barrens Grammia</b>		<b>SR</b>	<b>G4</b>	<b>S2S3</b>
<b>Hemileuca sp. 3</b>	<b>Midwestern Fen Buckmoth</b>		<b>ST</b>	<b>G5T3T4</b>	<b>S1?</b>
<b>Iodopepla u-album</b>	<b>A Noctuid Moth</b>		<b>SR</b>	<b>G5</b>	<b>S2</b>
<b>Leucania inermis</b>	<b>A Moth</b>		<b>SR</b>	<b>G5</b>	<b>S2S3</b>
<b>Leucania multilinea</b>			<b>SR</b>	<b>G5</b>	<b>S1S2</b>
<b>Loxagrotis grotei</b>	<b>Grote's Black-tipped Quaker</b>		<b>ST</b>	<b>G4</b>	<b>S2</b>
<b>Lycaeides melissa samuelis</b>	<b>Karner Blue</b>	<b>LE</b>	<b>SE</b>	<b>G5T2</b>	<b>S1</b>
<b>Lycaena dorcas dorcas</b>	<b>Dorcas Copper</b>		<b>SR</b>	<b>G5T5</b>	<b>S2</b>
<b>Lycaena helloides</b>	<b>Purplish Copper</b>		<b>SR</b>	<b>G5</b>	<b>S2S4</b>
<b>Macrochilo absorptalis</b>	<b>A Moth</b>		<b>SR</b>	<b>G4G5</b>	<b>S2S3</b>
<b>Macrochilo bivittata</b>	<b>Two-striped Cord Grass Moth</b>		<b>SE</b>	<b>G3G4</b>	<b>S1</b>
<b>Macrochilo hypocriticalis</b>	<b>A Noctuid Moth</b>		<b>SR</b>	<b>G4</b>	<b>S2</b>
<b>Melanchra assimilis</b>	<b>The Shadowy Arches</b>		<b>SE</b>	<b>G5</b>	<b>S1S2</b>
<b>Neonympha mitchellii mitchellii</b>	<b>Mitchell's Satyr</b>	<b>LE</b>	<b>SE</b>	<b>G2T2</b>	<b>S1</b>
<b>Oligia bridghami</b>	<b>A Noctuid Moth</b>		<b>ST</b>	<b>G5</b>	<b>S1</b>
<b>Panthea furcilla</b>			<b>SR</b>	<b>G5</b>	<b>S2S3</b>

Indiana Natural Heritage Data Center  
Division of Nature Preserves  
Indiana Department of Natural Resources  
This data is not the result of comprehensive county surveys.

Fed: LE = Endangered; LT = Threatened; C = candidate; PDL = proposed for delisting  
State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SX = state extirpated; SG = state significant; WL = watch list  
GRANK: Global Heritage Rank: G1 = critically imperiled globally; G2 = imperiled globally; G3 = rare or uncommon globally; G4 = widespread and abundant globally but with long term concerns; G5 = widespread and abundant globally; G? = unranked; GX = extinct; Q = uncertain rank; T = taxonomic subunit rank  
SRANK: State Heritage Rank: S1 = critically imperiled in state; S2 = imperiled in state; S3 = rare or uncommon in state; G4 = widespread and abundant in state but with long term concern; SG = state significant; SH = historical in state; SX = state extirpated; B = breeding status; S? = unranked; SNR = unranked; SNA = nonbreeding status unranked

Indiana County Endangered, Threatened and Rare Species List

County: Lagrange

Species Name	Common Name	FED	STATE	GRANK	SRANK
Papaipema silphii	Silphium Borer Moth		ST	G3G4	S2
Pieris oleracea	Eastern Veined White		SE	G5	S1
Poanes viator viator	Big Broad-winged Skipper		ST	G5T4	S2
Spartiniphaga includens	The Included Cordgrass Borer		ST	G4	S1
Speyeria idalia	Regal Fritillary	C	SE	G3	S1
<b>Insect: Odonata (Dragonflies &amp; Damselflies)</b>					
Aeshna tuberculifera	Black-tipped Darner		ST	G5	S2
Cordulegaster bilineata	Brown Spiketail		SE	G5	S3
Cordulegaster obliqua	Arrowhead Spiketail		SR	G4	S2S3
Dorocordulia libera	Racket-tailed Emerald		SE	G5	S2
Gomphus fraternus	Midland Clubtail			G5	S2
Gomphus quadricolor	Rapids Clubtail		ST	G3G4	S2
Gomphus ventricosus	Skillet Clubtail		ST	G3	S1S2
Hagenius brevistylus	Dragonhunter		SR	G5	S2S3
Nannothemis bella	Elfin Skimmer		SE	G4G5	S1S2
Nehalennia gracilis	Sphagnum Sprite		SE	G5	S1
Rhionaeschna mutata	Spatterdock Darner		ST	G4	S2S3
Stylurus amnicola	Riverine Clubtail		ST	G4	S1S2
Stylurus scudderi	Zebra Clubtail		SE	G5	S1
Sympetrum semicinctum	Band-winged Meadowhawk		SR	G5	S2S3
<b>Insect: Tricoptera (Caddisflies)</b>					
Nectopsyche pavida	A Longhorned Casemaker Caddisfly		SR	G5	S2
<b>Fish</b>					
Coregonus artedi	Cisco		SSC	G5	S2
Moxostoma valenciennesi	Greater Redhorse		SE	G4	S2
<b>Amphibian</b>					
Ambystoma laterale	Blue-spotted Salamander		SSC	G5	S2
Hemidactylium scutatum	Four-toed Salamander		SSC	G5	S2
Lithobates pipiens	Northern Leopard Frog		SSC	G5	S2
Necturus maculosus	Common mudpuppy		SSC	G5	S2
<b>Reptile</b>					
Clemmys guttata	Spotted Turtle	C	SE	G5	S2
Emydoidea blandingii	Blanding's Turtle	C	SE	G4	S2
Nerodia erythrogaster neglecta	Copperbelly Water Snake	PS:LT	SE	G5T3	S2
Sistrurus catenatus catenatus	Eastern Massasauga	LT	SE	G3	S2
Terrapene carolina carolina	Eastern Box Turtle		SSC	G5T5	S3
<b>Bird</b>					
Accipiter striatus	Sharp-shinned Hawk		SSC	G5	S2B
Ammodramus henslowii	Henslow's Sparrow		SE	G4	S3B

Indiana Natural Heritage Data Center  
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SRANK: State Heritage Rank: S1 = critically imperiled in state; S2 = imperiled in state; S3 = rare or uncommon in state; G4 = widespread and abundant in state but with long term concern; SG = state significant; SH = historical in state; SX = state extirpated; B = breeding status; S? = unranked; SNR = unranked; SNA = nonbreeding status unranked

Indiana County Endangered, Threatened and Rare Species List

County: Lagrange

Species Name	Common Name	FED	STATE	GRANK	SRANK
<b>Bartramia longicauda</b>	<b>Upland Sandpiper</b>		SE	G5	S3B
Buteo lineatus	Red-shouldered Hawk		SSC	G5	S3
Buteo platyterus	Broad-winged Hawk		SSC	G5	S3B
<b>Chlidonias niger</b>	<b>Black Tern</b>		SE	G4G5	S1B
<b>Circus hudsonius</b>	<b>Northern Harrier</b>		SE	G5	S2
<b>Cistothorus palustris</b>	<b>Marsh Wren</b>		SE	G5	S3B
<b>Cistothorus platensis</b>	<b>Sedge Wren</b>		SE	G5	S3B
Dendroica virens	Black-throated Green Warbler			G5	S2B
Empidonax alnorum	Alder Flycatcher			G5	S2B
Gallinago delicata	Wilson's Snipe			G5	S1S2B
<b>Gallinula galeata</b>	<b>Common gallinule</b>		SE	G5	S3B
Grus canadensis	Sandhill Crane		SSC	G5	S2B,S1N
Haliaeetus leucocephalus	Bald Eagle		SSC	G5	S2
<b>Ixobrychus exilis</b>	<b>Least Bittern</b>		SE	G5	S3B
<b>Lanius ludovicianus</b>	<b>Loggerhead Shrike</b>		SE	G4	S3B
<b>Nycticorax nycticorax</b>	<b>Black-crowned Night-heron</b>		SE	G5	S1B
<b>Pandion haliaetus</b>	<b>Osprey</b>		SE	G5	S1B
<b>Rallus limicola</b>	<b>Virginia Rail</b>		SE	G5	S3B
<b>Setophaga cerulea</b>	<b>Cerulean Warbler</b>		SE	G4	S3B
Sturnella neglecta	Western Meadowlark		SSC	G5	S2B
<b>Tyto alba</b>	<b>Barn Owl</b>		SE	G5	S2
<b>Vermivora chrysoptera</b>	<b>Golden-winged Warbler</b>	C	SE	G4	S1B
Wilsonia canadensis	Canada Warbler			G5	S2B
Wilsonia citrina	Hooded Warbler		SSC	G5	S3B
<b>Mammal</b>					
Condylura cristata	Star-nosed Mole		SSC	G5	S2?
Mustela nivalis	Least Weasel		SSC	G5	S2?
<b>Myotis sodalis</b>	<b>Indiana Bat or Social Myotis</b>	LE	SE	G2	S1
Taxidea taxus	American Badger		SSC	G5	S2
<b>Vascular Plant</b>					
<b>Actaea rubra</b>	<b>Red Baneberry</b>		ST	G5	S1
<b>Amelanchier humilis</b>	<b>Running Serviceberry</b>		SE	G5	S1
<b>Andromeda glaucophylla</b>	<b>Bog Rosemary</b>		SR	G5T5	S2
<b>Arabis missouriensis var. deamii</b>	<b>Missouri Rockcress</b>		SE	G5T3?Q	S1
<b>Armoracia aquatica</b>	<b>Lake Cress</b>		SE	G4?	S1
<b>Besseyia bullii</b>	<b>Kitten Tails</b>		SE	G3	S1
<b>Bidens beckii</b>	<b>Beck Water-marigold</b>		ST	G5	S1
<b>Botrychium matricariifolium</b>	<b>Chamomile Grape-fern</b>		SR	G5	S2
<b>Calla palustris</b>	<b>Wild Calla</b>		SE	G5	S1
<b>Carex alopecoidea</b>	<b>Foxtail Sedge</b>		SE	G5	S1

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Indiana County Endangered, Threatened and Rare Species List

County: Lagrange

Species Name	Common Name	FED	STATE	GRANK	SRANK
Carex bebbii	Bebb's Sedge		ST	G5	S2
Carex brunnescens	Brownish Sedge		SE	G5	S1
Carex cephaloidea	Thinleaf Sedge		SE	G5	S1
Carex debilis var. rudgei	White-edge Sedge		SR	G5T5	S2
Carex flava	Yellow Sedge		ST	G5	S2
Carex limosa	Mud Sedge		SE	G5	S1
Carex pedunculata	Longstalk Sedge		SR	G5	S2
Carex retrorsa	Retorse Sedge		SE	G5	S1
Chimaphila umbellata ssp. cisatlantica	Pipsissewa		ST	G5T5	S2
Circaea alpina	Small Enchanter's Nightshade		SX	G5	SX
Cirsium hillii	Hill's Thistle		SE	G3	S1
Conioselinum chinense	Hemlock Parsley		SE	G5	S1
Cornus rugosa	Roundleaf Dogwood		SR	G5	S2
Cypripedium calceolus var. parviflorum	Small Yellow Lady's-slipper		SR	G5	S2
Cypripedium candidum	Small White Lady's-slipper		WL	G4	S2
Deschampsia cespitosa	Tufted Hairgrass		SR	G5	S2
Dichanthelium boreale	Northern Witchgrass		SR	G5	S2
Drosera intermedia	Spoon-leaved Sundew		SR	G5	S2
Eleocharis equisetoides	Horse-tail Spikerush		SE	G4	S1
Eleocharis robbinsii	Robbins Spikerush		SR	G4G5	S2
Epigaea repens	Trailing Arbutus		WL	G5	S3
Equisetum variegatum	Variegated Horsetail		SE	G5	S1
Eriophorum angustifolium	Narrow-leaved Cotton-grass		SR	G5	S2
Eriophorum gracile	Slender Cotton-grass		ST	G5	S2
Eriophorum viridicarinatum	Green-keeled Cotton-grass		SR	G5	S2
Geum rivale	Purple Avens		SE	G5	S1
Gnaphalium macounii	Winged Cudweed		SX	G5	SX
Hydrocotyle americana	American Water-pennywort		SE	G5	S1
Juglans cinerea	Butternut		WL	G4	S3
Juncus balticus var. littoralis	Baltic Rush		SR	G5T5	S2
Lathyrus ochroleucus	Pale Vetchling Peavine		SE	G5	S1
Lathyrus venosus	Smooth Veiny Pea		ST	G5	S2
Linum sulcatum	Grooved Yellow Flax		SR	G5	S2
Lycopodiella inundata	Northern Bog Clubmoss		SE	G5	S1
Lycopodium hickeyi	Hickey's Clubmoss		SR	G5	S2
Lycopodium obscurum	Tree Clubmoss		SR	G5	S2
Matteuccia struthiopteris	Ostrich Fern		SR	G5	S2
Melampyrum lineare	American Cow-wheat		SR	G5	S2
Milium effusum	Tall Millet-grass		SR	G5	S2
Minuartia michauxii var. michauxii	Michaux's Stitchwort		SR	G5T5	S2

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Indiana County Endangered, Threatened and Rare Species List

County: Lagrange

Species Name	Common Name	FED	STATE	GRANK	SRANK
Myriophyllum verticillatum	Whorled Water-milfoil		SR	G5	S2
Oryzopsis racemosa	Black-fruit Mountain-ricegrass		SR	G5	S2
Panax trifolius	Dwarf Ginseng		WL	G5	S2
Panicum leibergii	Leiberg's Witchgrass		ST	G4	S2
Panicum subvillosum	A Panic-grass		SE	GNRQ	S1
Piptochaetium avenaceum	Blackseed Needlegrass		SR	G5	S2
Platanthera ciliaris	Yellow-fringe Orchis		SE	G5	S1
Platanthera hyperborea	Leafy Northern Green Orchis		ST	G5	S2
Platanthera leucophaea	Prairie White-fringed Orchid	LT	SE	G2G3	S1
Platanthera psycodes	Small Purple-fringe Orchis		SR	G5	S2
Poa paludigena	Bog Bluegrass		WL	G3	S3
Potamogeton friesii	Fries' Pondweed		ST	G5	S1
Potamogeton praelongus	White-stem Pondweed		ST	G5	S1
Potamogeton pusillus	Slender Pondweed		WL	G5	S2
Potamogeton richardsonii	Redheadgrass		SR	G5	S2
Potamogeton robbinsii	Flatleaf Pondweed		SR	G5	S2
Pyrola americana	American Wintergreen		SR	G5	S2
Rudbeckia fulgida var. fulgida	Orange Coneflower		WL	G5T4?	S2
Salix serissima	Autumn Willow		ST	G5	S2
Scheuchzeria palustris ssp. americana	American Scheuchzeria		SE	G5T5	S1
Schizachne purpurascens	Purple Oat		SE	G5	S1
Scirpus purshianus	Weakstalk Bulrush		SR	G4G5	S2
Scirpus subterminalis	Water Bulrush		SR	G5	S2
Selaginella rupestris	Ledge Spike-moss		ST	G5	S2
Spiranthes lucida	Shining Ladies'-tresses		SR	G4	S2
Spiranthes romanzoffiana	Hooded Ladies'-tresses		ST	G5	S1
Symphyotrichum boreale	Rushlike Aster		SR	G5	S2
Tofieldia glutinosa	False Asphodel		SR	G5	S2
Triglochin palustris	Marsh Arrow-grass		SR	G5	S2
Utricularia cornuta	Horned Bladderwort		ST	G5	S2
Utricularia minor	Lesser Bladderwort		ST	G5	S1
Utricularia resupinata	Northeastern Bladderwort		SE	G4	S1
Vaccinium oxycoccos	Small Cranberry		ST	G5	S2
Valeriana uliginosa	Marsh Valerian		SE	G4	S1
Viburnum cassinoides	Northern Wild-raisin		SE	G5T5	S1
Viburnum opulus var. americanum	Highbush-cranberry		SE	G5T5	S1
Xyris difformis	Carolina Yellow-eyed Grass		ST	G5	S2
Zigadenus elegans var. glaucus	White Camas		SR	G5T4T5	S2
<b>High Quality Natural Community</b>					
Forest - flatwoods sand	Sand Flatwoods		SG	G2?	S1

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Indiana County Endangered, Threatened and Rare Species List

County: Lagrange

Species Name	Common Name	FED	STATE	GRANK	SRANK
Forest - floodplain wet	Wet Floodplain Forest		SG	G3?	S3
Forest - floodplain wet-mesic	Wet-mesic Floodplain Forest		SG	G3?	S3
Forest - upland dry Northern Lakes	Northern Lakes Dry Upland Forest			GNR	S1
Forest - upland mesic Northern Lakes	Northern Lakes Mesic Upland Forest			GNR	S1
Lake - lake	Lake		SG	GNR	S2
Lake - pond	Pond		SG	GNR	SNR
Wetland - beach marl	Marl Beach		SG	G3	S2
Wetland - bog acid	Acid Bog		SG	G3	S2
Wetland - bog circumneutral	Circumneutral Bog		SG	G3	S3
Wetland - fen	Fen		SG	G3	S3
Wetland - fen forested	Forested Fen		SG	G3	S1
Wetland - marsh	Marsh		SG	GU	S4
Wetland - meadow sedge	Sedge Meadow		SG	G3?	S1
Wetland - swamp forest	Forested Swamp		SG	G2?	S2
Wetland - swamp shrub	Shrub Swamp		SG	GU	S2

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# **APPENDIX F: Water Resources**

# WATERS DETERMINATION REPORT

S.R. 5 FROM U.S. 20 TO SCHOOL STREET  
ROAD IMPROVEMENTS  
NEWBURY TOWNSHIP, LAGRANGE COUNTY, INDIANA  
DES. NO. 1700179

**Prepared for:**  
Strand Associates, Inc.

May 9, 2019



**Prepared by:**

**Metric Environmental, LLC**

**Complex Environment. Creative Solutions.**

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**WATERS OF THE U.S. DETERMINATION REPORT**  
**S.R. 5 from U.S. 20 to School Street**  
**Road Improvements**  
**Newbury Township, LaGrange County, Indiana**  
**Des. No. 1700179**  
**Metric Project No. 18-0046-7**  
**Prepared By: Cory Shumate, Metric Environmental, LLC**  
**May 9, 2019**

**Date of Waters Field Investigation:** September 20, 2018

**Location:**

Sections 10, 11, 14, 15, 22, and 23; Township 37 North; Range 8 East  
 Shipshewana, IN 7.5-minute U.S.G.S. Topographic Quadrangles (**Exhibit 2**)  
 Newbury Township, LaGrange County, Indiana  
 12-Digit HUC Watershed: 040500011105

**National Wetlands Inventory (NWI) Information:**

One mapped NWI wetland is located within the project study area, as shown on **Exhibit 5**. This NWI wetland was identified as a Riverine, Unknown Perennial, Unconsolidated Bottom, Semi-permanently Flooded, Excavated (R5UBFx) wetland is located approximately 290 feet north of the southern project study limits and is associated with Cotton Lake Ditch. A table of the twenty-seven mapped NWI wetlands located within a 0.5-mile radius of the project study area is provided below.

<b>Map Unit Symbol</b>	<b>Cowardin Classification</b>	<b>Number in 0.5 Mile Radius</b>
PEM1C	Palustrine, Emergent, Persistent, Seasonally Flooded	9
PUBGx	Palustrine, Unconsolidated Bottom, Intermittently Exposed, Excavated	5
PUBF	Palustrine, Unconsolidated Bottom, Semipermanently Flooded	3
PEM1B	Palustrine, Emergent, Persistent, Seasonally Saturated	2
PEM1Bd	Palustrine, Emergent, Persistent, Seasonally Saturated, Partly Drained/Ditched	1
PSS1C	Palustrine, Scrub-shrub, Broad-leaved Deciduous, Seasonally Flooded	1
PUBFx	Palustrine, Unconsolidated Bottom, Semipermanently Flooded, Excavated	1
PUBG	Palustrine, Unconsolidated Bottom, Intermittently Exposed	1
PUBH	Palustrine, Unconsolidated Bottom, Permanently Flooded	1

Map Unit Symbol	Cowardin Classification	Number in 0.5 Mile Radius
PFO1C	Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded	1
R5UBFx	Riverine, Unknown Perennial, Unconsolidated Bottom, Semi-permanently Flooded, Excavated	1
R4SBC	Riverine, Intermittent, Streambed, Seasonally Flooded	1

**Karst Feature Information:**

No karst features are located within 0.5 mile of the project study area.

**FEMA Insurance Rate Map (FIRM):**

No mapped floodplain was located within the project study area. The nearest mapped floodplain was 2.28 miles southwest of the project study area. This mapped floodplain, identified as Zone A, an area subject to inundation by the 1 percent annual chance of flood, was associated with Little Elkhart River. The FIRM map for this area is provided as **Exhibit 3**.

**Soils:**

According to the Natural Resources Conservation Service (NRCS) Soil Survey Geographic (SSURGO) Database for LaGrange County, Indiana, the project study limits contained eight mapped soil units. The NRCS soil survey map is provided as **Exhibit 5**.

Map unit symbol	Map unit name	Hydric Rating (%)
Gf	Gilford sandy loam, 0 to 2 percent slopes, gravelly subsoil	Hydric (95%)
Se	Sebewa loam, drained, 0 to 1 percent slopes	Hydric (95%)
Rb	Rensselaer loam, 0 to 1 percent slopes	Hydric (88%)
BxA	Bronson sandy loam, 0 to 3 percent slopes	Hydric (6%)
CrA	Conover loam, 0 to 3 percent slopes	Hydric (3%)
OsA	Oshtemo loamy sand, 0 to 2 percent slopes	Hydric (3%)
OsB	Oshtemo loamy sand, 2 to 6 percent slopes	Not Hydric
Ud	Udorthents, loamy	Not Hydric

**Attached Documents:**

- Maps of the project area (**Exhibits 1-6**)
- Photo Location Map (**Exhibit 7**)
- Site Photographs
- Wetland Determination Data Form(s)
- Preliminary Jurisdictional Determination Form

**Note: Location, Topographic, and Photo Location Maps and Site Photographs removed for space conservation. See similar in Appendix B.**

**Project Description:**

The proposed project (Des. No. 1700179) includes construction of auxiliary lanes and two-way left turn lanes along S.R. 5 from U.S. 20 to School St., approximately 1.5 miles long in Shipshewana, Newbury Township, LaGrange County, Indiana. Specifically, the project is located in Sections 10, 11, 14, 15, 22, and 23; Township 37 North; Range 8 East of the Shipshewana, Indiana 7.5 minute United States Geological Survey topographic quadrangle (**Exhibit 2**).

**Field Reconnaissance:**

The wetland determination field visit was conducted on September 20, 2018 by Zachary Root of Metric Environmental, LLC. The project study limits consist of the area that has the potential to be impacted, based on the provided design scenario. This area was evaluated for the presence of wetlands and Waters of the United States. This investigation was conducted in accordance with the *1987 U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual* and the *January 2012 Northcentral and Northeast Regional Supplement (version 2.0) Manual*.

The proposed project is approximately 1.5 miles long along S.R. 5 between U.S. 20 and School St. in Shipshewana, Indiana. The project study limits extended approximately 50 feet east and west from the centerline of S.R. 5 for 1.5 miles from US 20 to School St. An aerial map of a sampling points, wetlands, and the location of Cotton Lake Ditch is provided as **Exhibit 6**. A photo location map is provided as **Exhibit 7** and site photographs are attached.

The site was investigated for evidence of hydrophytic vegetation, hydric soil, and wetland hydrology to determine if the project impacts wetlands and other Waters of U.S. The sampling point (SP) locations were chosen in possible wetland areas within the project study limits. The uplands consist of road right-of-way (ROW). The sampling points, recorded on the USACE Wetland Determination Data Forms and shown on **Exhibit 6**, provided the following information:

**Sampling Plot Data Summary Table  
S.R. 5 from U.S. 20 to School St.  
Road Improvements  
Newbury Township, LaGrange County, Indiana  
Des. No. 1700179**

Plot #	Photo #s	Lat/Long	Hydrophytic Vegetation	Hydric Soils	Wetland Hydrology	Within Wetland
SP-A1	82-84	41.655625 -85.580427	Yes	Yes	Yes	Yes, Wetland A
SP-A2	85-87	41.655474 -85.580404	No	No	No	No, Wetland A Upland
SP-1	4-6	41.674074 -85.580446	No	Yes	Yes	No

Plot #	Photo #s	Lat/Long	Hydrophytic Vegetation	Hydric Soils	Wetland Hydrology	Within Wetland
SP-2	43-45	41.664488 -85.580513	Yes	No	Yes	No
SP-3	46-48	41.664438 -85.580496	No	No	No	No

**Wetlands:**

Wetland A was observed within the project study limits during the field reconnaissance. Descriptions of the sampling points for the wetland are provided below.

**Wetland Summary Table  
S.R. 5 from U.S. 20 to School St.  
Road Improvements  
Newbury Township, LaGrange County, Indiana  
Des. No. 1700179**

Wetland	Photo #s	Lat/Long	Cowardin Class	Est. Amount in Review Area	Quality	Likely Water of the U.S.
Wetland A	77-84, 89	41.655655 -85.580408	PEM1A	0.040 acre	Poor	Yes
<b>Total Wetland Amount in Review Area</b>				0.040 acre		

**Wetland A (0.459 acre) – PFO1A**

Wetland A was a Palustrine, Emergent, Persistent, Seasonally Flooded (PEM1A) wetland located west of S.R. 5 in a concave depression adjacent to Cotton Lake Ditch. Approximately 0.040 acre of Wetland A was contained within the project study limits and continued northwest beyond the project study limits along Cotton Lake Ditch. Since Wetland A is adjacent to Cotton Lake Ditch (**Exhibit 6**), it can be deduced that water drains from Wetland A into Cotton Lake Ditch. Therefore, it can be deduced that Wetland A shares a significant nexus with Cotton Lake Ditch, which flows northwest into Cotton Lake, which flows northwest into an unnamed tributary (UNT) to Shipshewana Lake, which flows northwest into Shipshewana Lake, which flows east into Page Ditch, which flows north into the Pigeon River, which flows west into the St. Joseph River, which becomes a Section 10 traditional navigable waterway (TNW) at the 24.7 river mile. Therefore, Wetland A should be considered a jurisdictional Water of the U.S. Wetland A was associated with a mapped NWI unit (R5UBFx). Wetland A was formed within a CrA mapped soil unit which is listed as containing 3-percent hydric components. Wetland A was adjacent to S.R. 5 and residential property and likely receives run-off from these sources. In addition, Wetland A exhibited poor plant species diversity. No wildlife was observed in Wetland A. These factors contribute to the conclusion that Wetland A does not support significant wildlife or aquatic habitat, and therefore should be considered poor quality.

#### Sampling Point A1 (SP-A1) – Wetland A

SP-A1 was located in a concave depression within the bank of Cotton Lake Ditch, west of S.R. 5. The dominant vegetation at this sampling point was reed canary grass (*Phalaris arundinacea*, FACW) and narrow-leaf cat-tail (*Typha angustifolia*, OBL) in the herb stratum, and Virginia creeper (*Parthenocissus quinquefolia*, FACU) in the woody vine stratum. This met the criteria for hydrophytic vegetation with a dominance test of 66.7 percent and a prevalence index of 2.58. To a depth of 9 inches, the soil in the soil pit was a silt loam. From 9 to 15 inches, the soil in the soil pit was a sandy loam. From 15 to 16 inches, the soil in the soil pit was a histosol. From 16 to 20 inches, the soils in the soil pit were a sandy loam. From 0 to 9 inches, the soil exhibited a matrix color of 10YR 3/2 (85 percent) with 5YR 4/6 (15 percent) prominent mottles in the matrix. From 9 to 15 inches, the soil exhibited a matrix color of 10YR 3/1 (95 percent) with 10YR 5/6 (5 percent) prominent mottles in the matrix. From 15 to 16 inches, the soils exhibited a matrix color of 10YR 2/1 (100 percent). From 16 to 20 inches, the soils exhibited a matrix color of 10YR 4/2 (100 percent). This met the criteria for hydric soil with redox dark surface (F6). Primary indicators of wetland hydrology observed during the field reconnaissance include surface water (A1), high water table (A2), and saturation (A3); and one secondary indicator observed was geomorphic position (D2) due to the sampling point's location on the bank of Cotton Lake Ditch. Since all three required wetland criteria were met, this area qualified as a wetland.

#### Sampling Point A2 (SP-A2) – Wetland A Upland

SP-A2 was located on a hillslope within ROW, south of Wetland A, and west of S.R. 5. The dominant vegetation at this sampling point was Kentucky blue grass (*Poa pratensis*, FACU) in the herb stratum. This resulted in a dominance test of 0.0 percent and a prevalence index of 4.00, which did not meet the criteria of hydrophytic vegetation. To a depth of 20 inches, the soils in the soil pit were a silty clay loam. From 0 to 20 inches, the soil exhibited a matrix color of 10YR 3/1 (100 percent). This did not meet the criteria for hydric soils. No indicators of wetland hydrology were observed during the field reconnaissance. Since none of the three wetland criteria were met, this area did not qualify as a wetland.

#### **Additional Sampling Points:**

Three additional sampling points were taken in areas where a wetland was suspected but did not meet all three of the required wetland criteria. Descriptions of these sampling points are included below.

#### Sampling Point 1 (SP-1)

SP-1 was located within roadside ditch (RSD) 1, on the east side of S.R. 5, south of School St. The dominant vegetation at this sampling point was Kentucky blue grass (*Poa pratensis*, FACU), pink weed (*Persicaria pensylvanica*, FACW), and yellow wood sorrel (*Oxalis stricta*, FACU) in the herb stratum. This resulted in a dominance test of 33.3 percent and a prevalence index of 3.56, which did not meet the criteria for hydrophytic vegetation. To a depth of 20 inches, the soil in the soil pit was a sandy loam. From 0 to 5 inches, the soil exhibited a matrix color of 10YR 3/2 (100 percent). From 5 to 13 inches, the soil in the soil pit exhibited a matrix color of 10YR 3/2 (95

percent) with 7.5YR 5/6 (5 percent) prominent mottles in the matrix. From 13 to 20 inches, the soil exhibited a matrix color of 10YR 3/2 (90 percent) with 5YR 4/6 (10 percent) prominent mottles in the matrix. This met the criteria for hydric soil with redox dark surface (F6). Two secondary indicators of wetland hydrology observed during the field reconnaissance include surface soil cracks (B6) and geomorphic position (D2) due to the sampling point's location within a roadside ditch. Since only two of the three required wetland criteria were met, this area did not qualify as a wetland.

#### Sampling Point 2 (SP-2)

SP-2 was located within a concave depression west of S.R. 5. The dominant vegetation at this sampling point was narrow-leaf cat-tail (*Typha angustifolia*, OBL), stinging nettle (*Urtica dioica*, FAC), and climbing nightshade (*Solanum dulcamara*, FAC) in the herb stratum. This met the criteria for hydrophytic vegetation with a dominance test of 100.0 percent and a prevalence index of 2.75. To a depth of 5 inches, the soil in the soil pit was a sandy loam. From 5 to 15 inches, the soil in the soil pit was a silty clay loam. From 0 to 5 inches, the soil exhibited a matrix color of 10YR 2/1 (100 percent). From 5 to 15 inches, the soil exhibited a matrix color of 10YR 2/1 (95 percent) with 10YR 2/2 (5 percent) faint mottles in the matrix. A riprap layer was present at a depth of 15 inches which prevented further excavation. This did not meet the criteria for hydric soils. Indicators of wetland hydrology observed during the field reconnaissance include surface water (A1), high water table (A2), saturation (A3), and geomorphic position (D2) due to the sampling point's location in a concave depression. Since only two of the three required wetland criteria were met, this area did not qualify as a wetland.

#### Sampling Point 3 (SP-3)

SP-3 was located within road ROW, south of SP-2, and west of S.R. 5. The dominant vegetation at this sampling point was Kentucky blue grass (*Poa pratensis*, FACU) in the herb stratum. This resulted in a dominance test of 0.0 percent and a prevalence index of 4.00, which did not meet the criteria for hydrophytic vegetation. To a depth of 13 inches, the soil in the soil pit was a sandy loam. From 13 to 20 inches, the soils in the soil pit were a silty clay loam. From 0 to 13 inches, the soil exhibited a matrix color of 10YR 3/2 (100 percent). From 13 to 20 inches, the soils exhibited a matrix color of 10YR 2/1 (100 percent). This did not meet the criteria for hydric soils. No indicators of wetland hydrology were observed during the field reconnaissance. Since none of the three wetland criteria were met, this area did not qualify as a wetland.

#### **Streams:**

One stream, Cotton Lake Ditch, was observed within the project study limits during the field reconnaissance and is noted on **Exhibit 6**.

**Stream Summary Table**  
**S.R. 5 from U.S. 20 to School St.**  
**Road Improvements**  
**Newbury Township, LaGrange County, Indiana**  
**Des. No. 1700179**

Stream Name	Photo #s	Lat/Long	OHWM Width (ft.)	OHWM Depth (ft.)	USGS Blue-line	Riffles and Pools	Dominant Substrate	Quality	Likely Water of the U.S.	Potential Stream Impact (ft.)
Cotton Lake Ditch	77-81, 84, 86, 89	41.655546 -85.580312	4.0	1.0	Yes (Intermittent)	No	Silt & Clay	Poor	Yes	61.4 (0.006 acre)

**Cotton Lake Ditch (61.4 LFT)(0.006 acre)**

Cotton Lake Ditch flowed northwest through the project study limits via a corrugated metal pipe culvert before flowing into a concave depression west of S.R. 5 for approximately 61.4 linear feet (0.006 acre). Cotton Lake Ditch flows northwest into Cotton Lake, which flows northwest into an unnamed tributary (UNT) to Shipshewana Lake, which flows northwest into Shipshewana Lake, which flows east into Page Ditch (Taylor Lake), which flows north into Pigeon River, which flows west into St. Joseph River, which becomes a Section 10 TNW at the 24.7 river mile. Therefore Cotton Lake Ditch should be considered a jurisdictional Water of the U.S. Cotton Lake Ditch was associated with a dashed blue line on the USGS topographic map, indicating that it is an intermittent stream and was associated with a mapped NWI unit (R5UBFx). According to USGS *Indiana Streamstats*, the drainage area upstream of the project study area was 0.42 square mile. The stream had an Ordinary High Water Mark (OHWM) width of 4.0 feet and depth of 1.0 feet. The stream substrate consisted of silt, clay, and sand. Cotton Lake Ditch’s riparian corridor was narrow and consisted of old field and road ROW. The stream was flowing at the time of the field reconnaissance and exhibited low sinuosity with a flat stream gradient. Vegetation observed along the banks of Cotton Lake Ditch included reed canary grass (*Phalaris arundinacea*, FACW), narrow-leaf cat-tail (*Typha angustifolia*, OBL), spotted touch-me-not (*Impatiens capensis*, FACW), stinging nettle (*Urtica dioica*, FAC), annual ragweed (*Ambrosia artemisiifolia*, FACU), Queen Anne’s-Lace (*Daucus carota*, UPL), Canada goldenrod (*Solidago canadensis*, FACU), Canada thistle (*Cirsium arvense*, FACU), great mullein (*Verbascum Thapsus*, UPL), common milkweed (*Asclepias syriaca*, UPL), and common mare’s-tail (*Hippuris vulgaris*, OBL). No wildlife was observed in Cotton Lake Ditch during the time of the field reconnaissance. These factors contribute to the conclusion that Cotton Lake Ditch was a poor-quality stream.

**Roadside Ditches**

Twelve roadside ditches were identified within the project study limits during the field reconnaissance. No OHWM was observed, so these features are likely non-jurisdictional. A

summary table of the roadside ditches observed during the field reconnaissance is provided below.

**Roadside Ditch Summary Table  
S.R. 5 from U.S. 20 to School St.  
Road Improvements  
Newbury Township, LaGrange County, Indiana  
Des. No. 1700179**

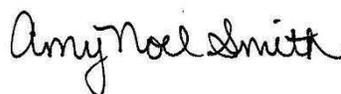
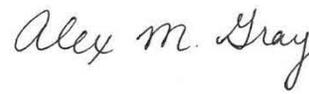
<b>Name</b>	<b>Photo #s</b>	<b>Lat/Long</b>	<b>Linear Length (ft)</b>	<b>Description</b>
<b>RSD 1</b>	1, 3, 5-7, 11	41.673783 -85.580473	972.8	Vegetated Swale, Riprap
<b>RSD 2</b>	9, 14	41.672773 -85.580663	230.9	Vegetated Swale
<b>RSD 3</b>	18, 23	41.671079 -85.580401	367.7	Vegetated Swale
<b>RSD 4</b>	31, 32	41.66761 -85.580341	114.3	Vegetated Swale
<b>RSD 5</b>	35	41.667085 -85.580328	80.6	Vegetated Swale
<b>RSD 6</b>	39, 40	41.665837 -85.580292	283.3	Vegetated Swale
<b>RSD 7</b>	40, 51, 52, 55	41.663711 -85.580254	1,166.5	Vegetated Swale
<b>RSD 8</b>	53	41.663223 -85.580473	217.5	Vegetated Swale
<b>RSD 9</b>	58, 59, 64	41.660501 -85.580188	488.9	Vegetated Swale
<b>RSD 10</b>	61, 62	41.660657 -85.580408	131.8	Vegetated Swale
<b>RSD 11</b>	66, 69, 70, 73, 74	41.658398 -85.580378	971.6	Vegetated Swale
<b>RSD 12</b>	86-89, 92, 93, 96	41.655187 -85.580378	258.0	Vegetated Swale

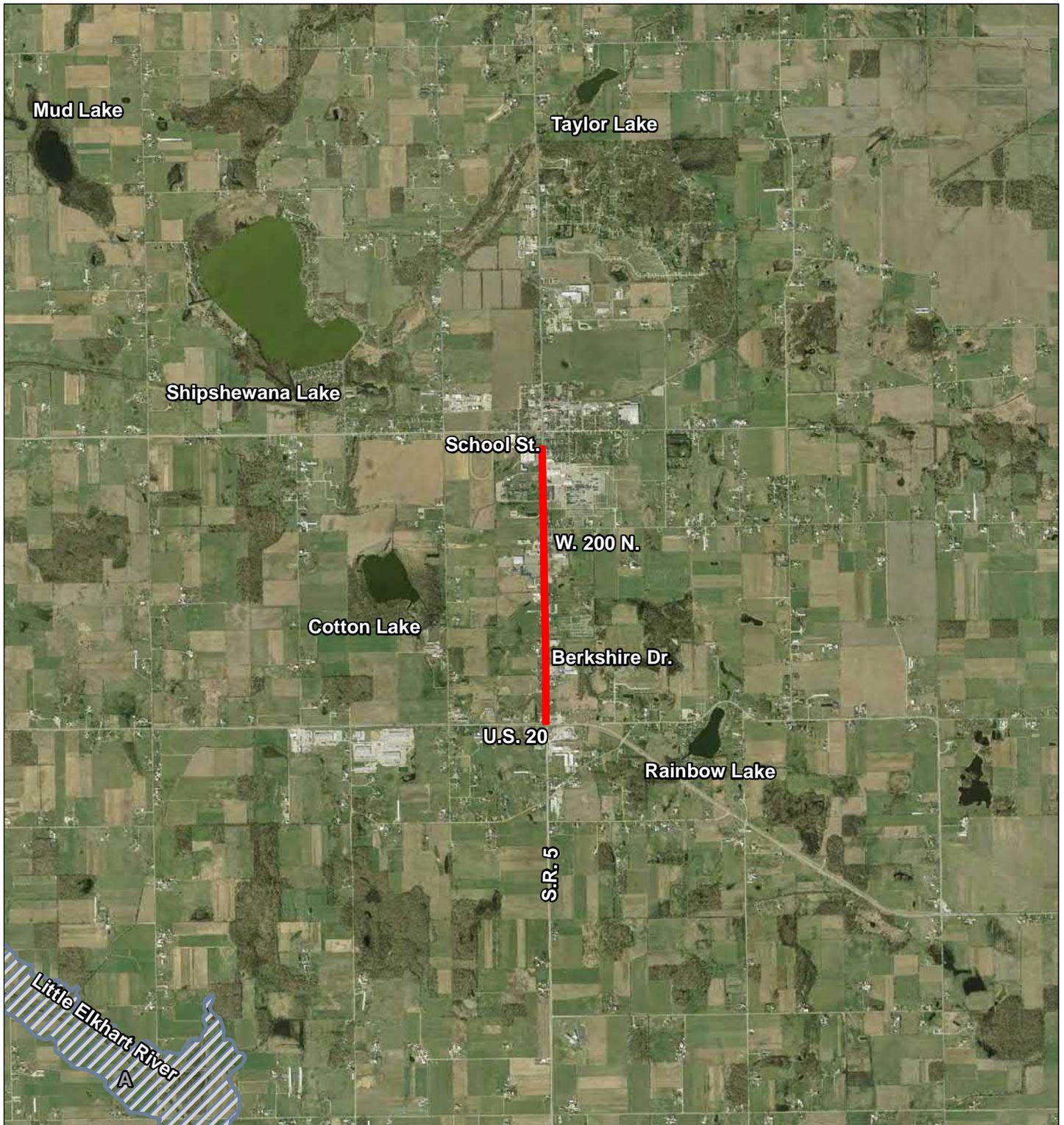
**Conclusion:**

One PEM1A wetland, totaling 0.040 acre, was identified during the field reconnaissance. One stream, Cotton Lake Ditch, totaling 61.4 linear feet (0.006 acre), was also identified in the project study area. Every effort should be taken to avoid or minimize impacts to these waterways. If impacts are necessary, mitigation may be required. The final determination of jurisdictional waters is ultimately made by the USACE. This report is our best judgment based on the guidelines set forth by USACE.

**Acknowledgements:**

This waters determination has been prepared based on the best available information, interpreted in the light of the investigator's training, experience and professional judgement in conformance with the 1987 Corps of engineers Wetlands Delineation Manual, the appropriate regional supplement, the USACE Jurisdictional Determination Form Instructional Guidebook, and other appropriate agency guidelines.

<b>Metric Environmental Staff</b>	<b>Position</b>	<b>Contributing Effort</b>	<b>Signature/Date</b>
<b>Amy Noel Smith</b>	<b>Natural Resources Project Manager</b>	<b>Project Manager</b>	 5/9/19
<b>Alex Gray</b>	<b>Natural Resources Technical Consultant</b>	<b>QAQC</b>	 5/9/19
<b>Zachary Root</b>	<b>Environmental Scientist II</b>	<b>Field Data Collection</b>	 5/9/19
<b>Cory Shumate</b>	<b>Environmental Scientist I</b>	<b>Report Preparation</b>	 5/9/19



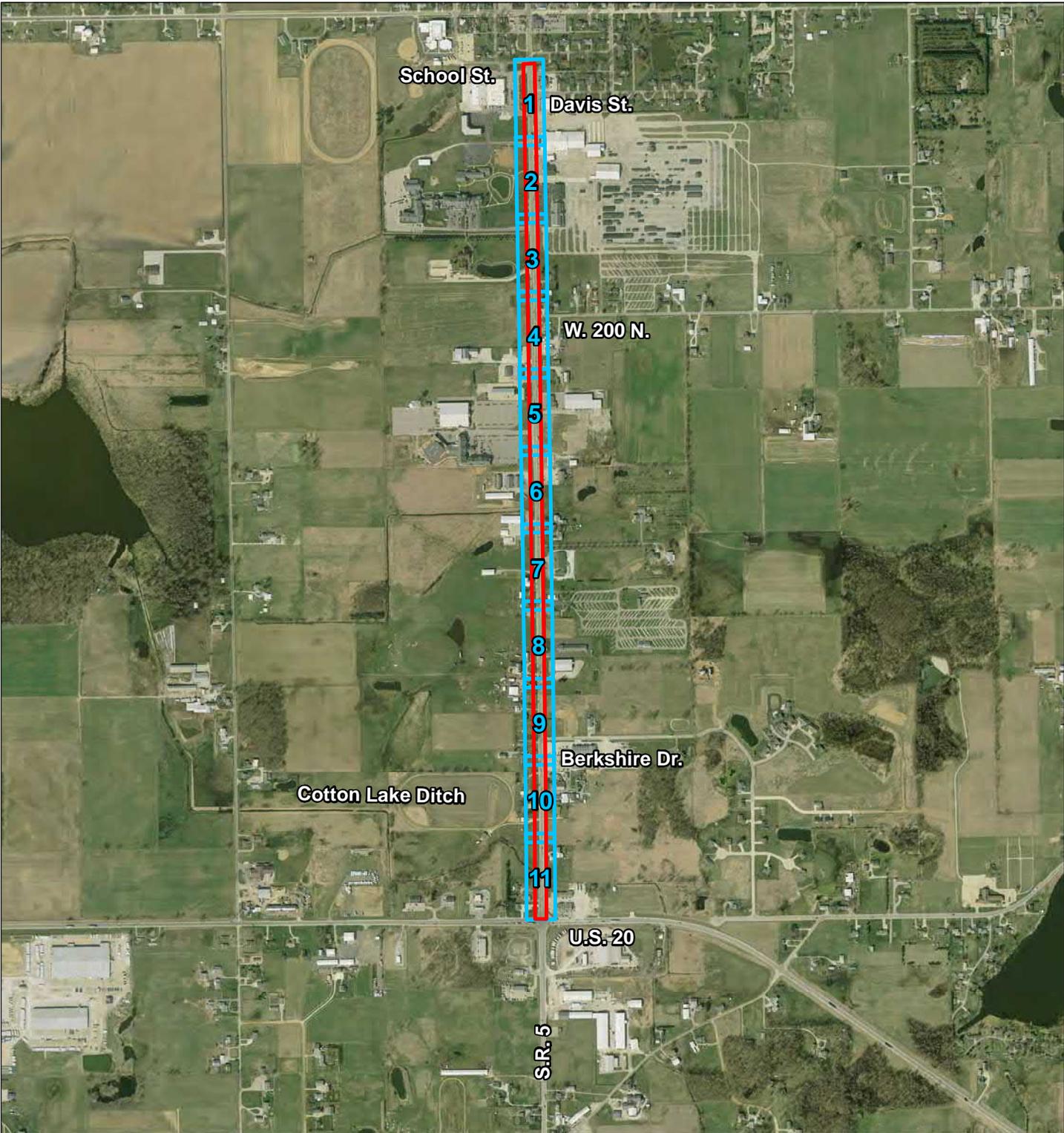
Project Study Limits (PSL)
  Floodplain - Zone A - 1% Annual Chance

Exhibit 3 - FEMA Flood Insurance Rating Map (FIRM)  
 S.R. 5 from U.S. 20 to School Street  
 Road Improvements  
 Newbury Township, LaGrange County, Indiana  
 Des. No. 1700179  
 Metric Project No. 18-0046-7  
 Map Date: 9/17/2018  
 Map Author: Zachary Root

All locations approximate  
 Source: Indiana Spatial Data Portal (2012)



Exh. 3



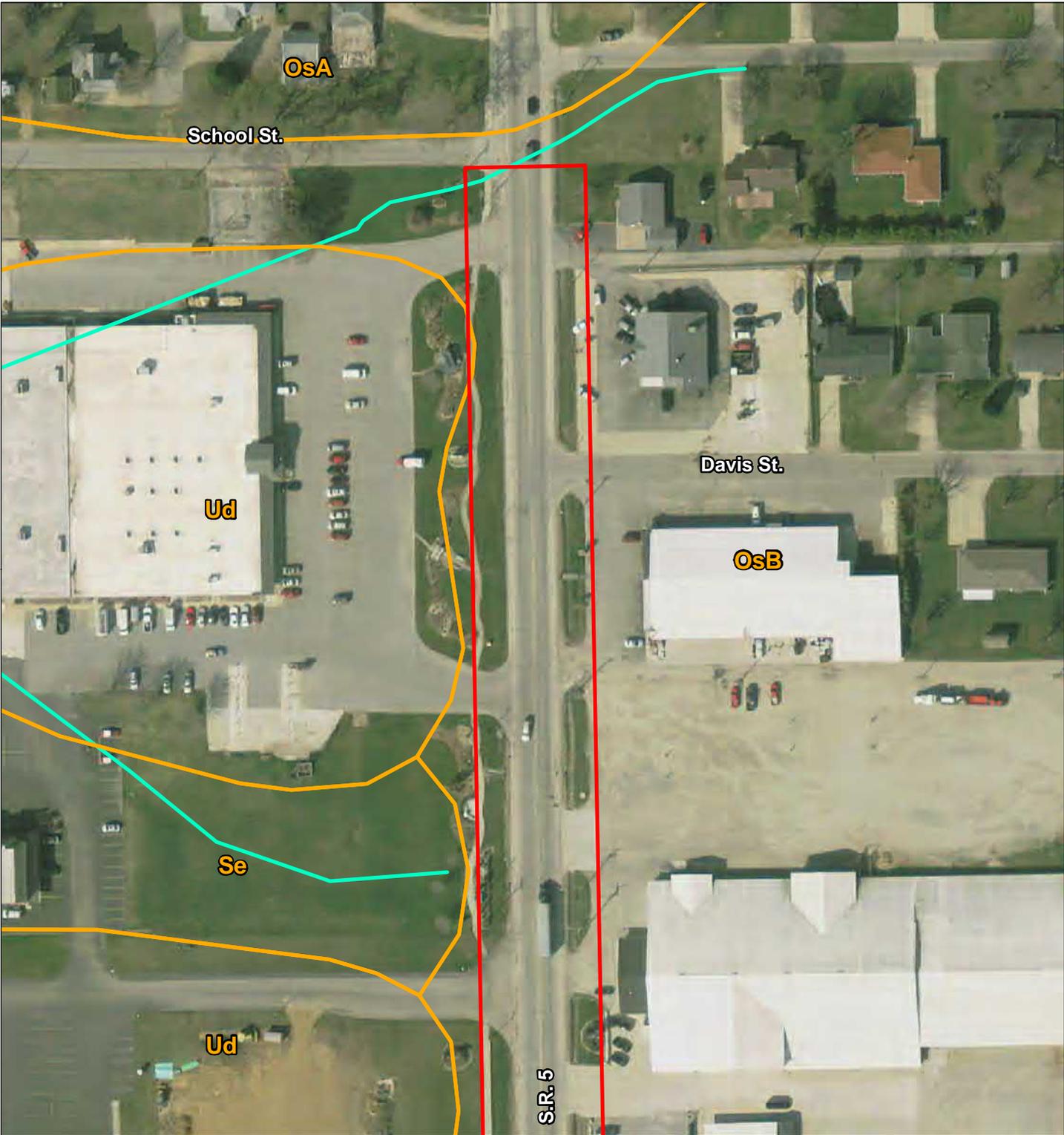
Project Study Limits (PSL)
  Exhibits 5, 6, & 7 Page Reference

Exhibit 4 - Page Reference for Exhibits 5, 6, & 7  
 S.R. 5 from U.S. 20 to School Street  
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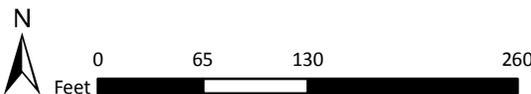
Exh. 4



Project Study Limits (PSL)
  NWI Wetland
  NHD Stream
  NRCS Soil Survey

Exhibit 5 - NWI Wetland, NHD Stream, and  
 NRCS Soil Survey Map  
 S.R. 5 from U.S. 20 to School Street  
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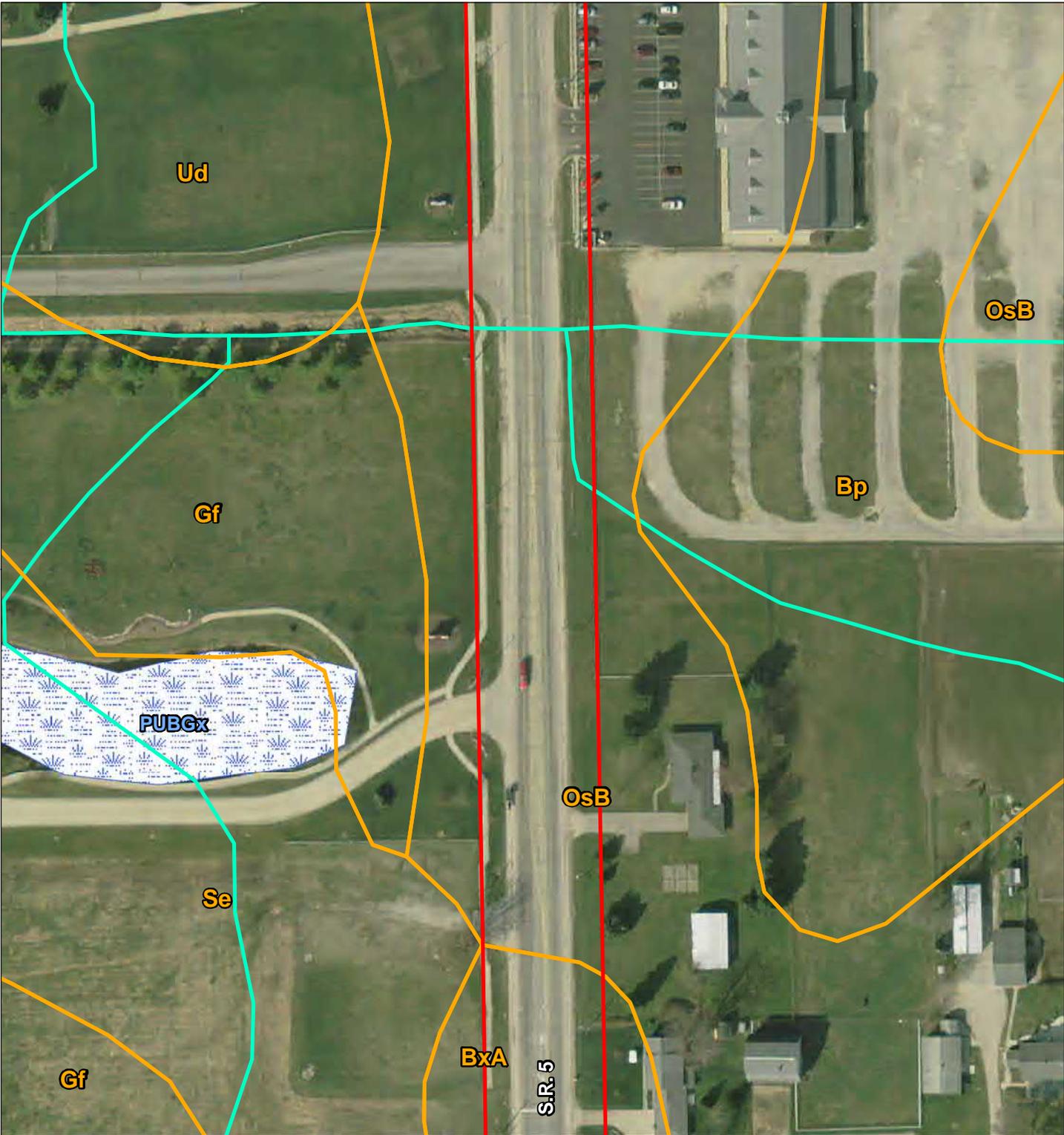


Project Study Limits (PSL)    
  NWI Wetland    
  NHD Stream    
  NRCS Soil Survey

Exhibit 5 - NWI Wetland, NHD Stream, and  
 NRCS Soil Survey Map  
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All locations approximate  
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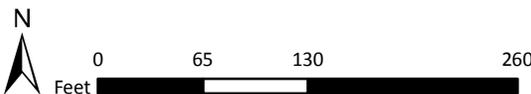
Project Study Limits (PSL)
 
 NWI Wetland
 

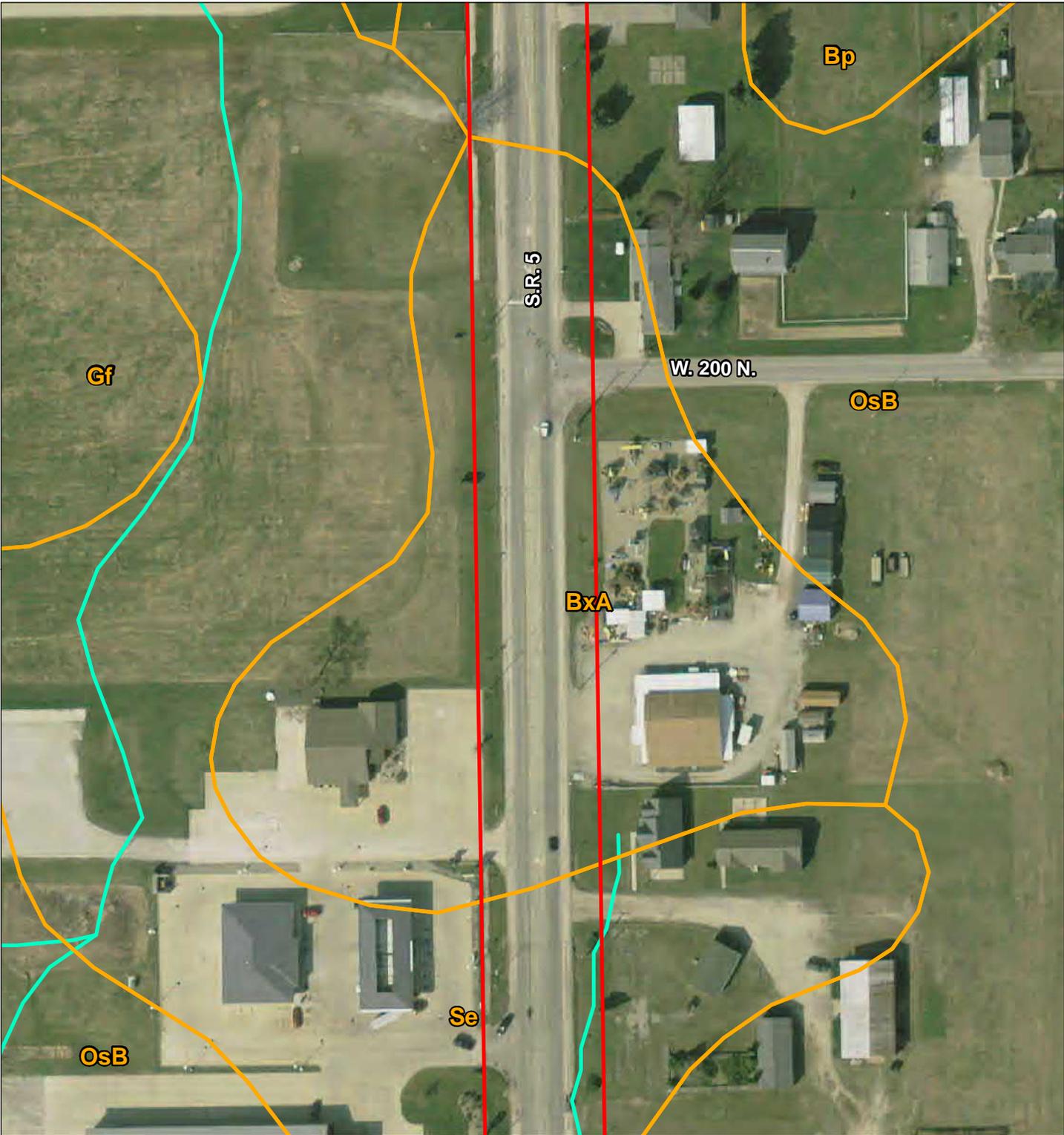
 NHD Stream
 

 NRCS Soil Survey

Exhibit 5 - NWI Wetland, NHD Stream, and  
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Project Study Limits (PSL)
 
 NWI Wetland
 

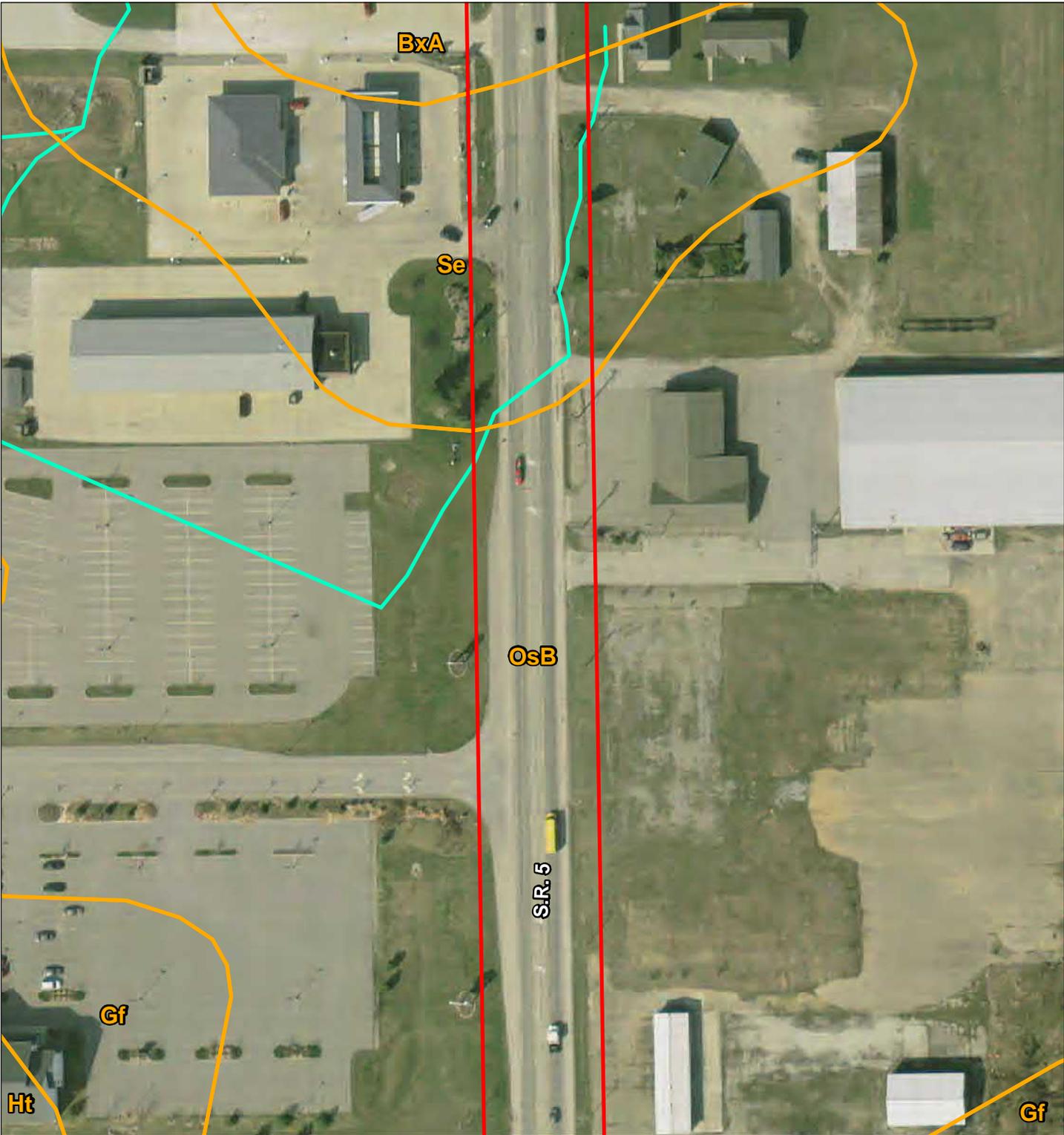
 NHD Stream
 

 NRCS Soil Survey

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All locations approximate  
 Source: Indiana Spatial Data Portal (2012)





Project Study Limits (PSL)
 
 NWI Wetland
 

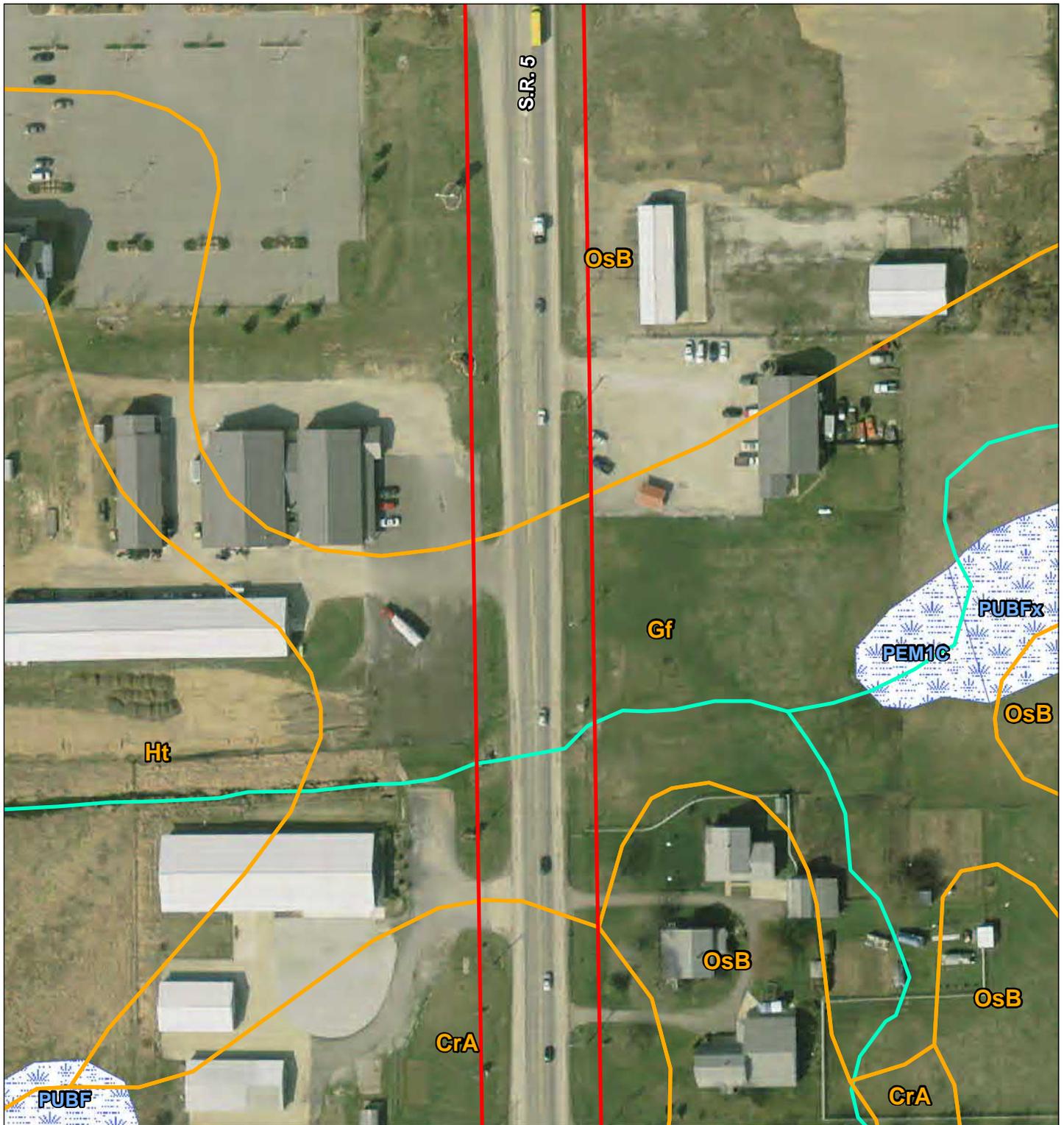
 NHD Stream
 

 NRCS Soil Survey

Exhibit 5 - NWI Wetland, NHD Stream, and  
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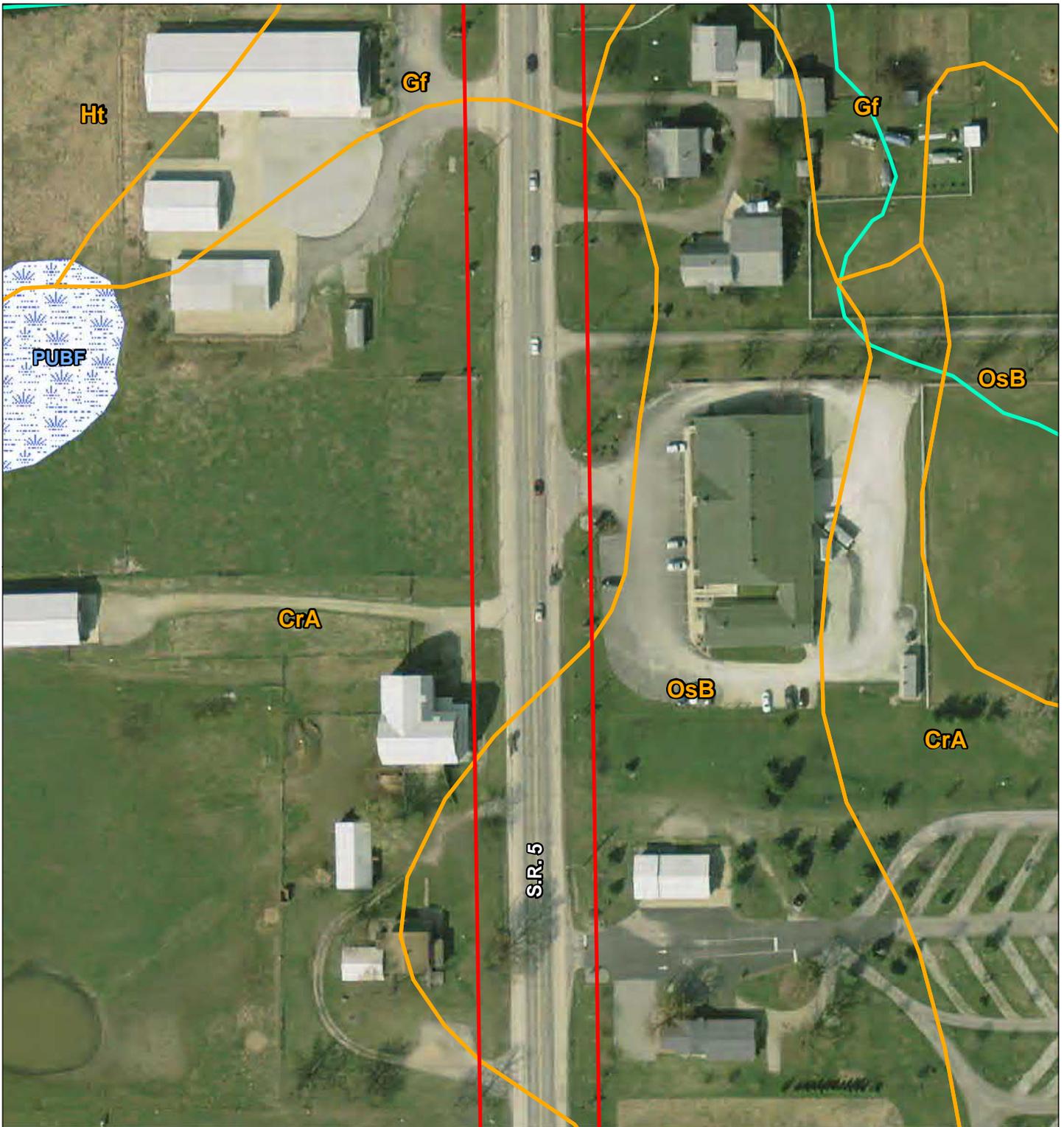


Project Study Limits (PSL)
  NWI Wetland
  NHD Stream
  NRCS Soil Survey

Exhibit 5 - NWI Wetland, NHD Stream, and  
 NRCS Soil Survey Map  
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Project Study Limits (PSL)
 
 NWI Wetland
 

 NHD Stream
 

 NRCS Soil Survey

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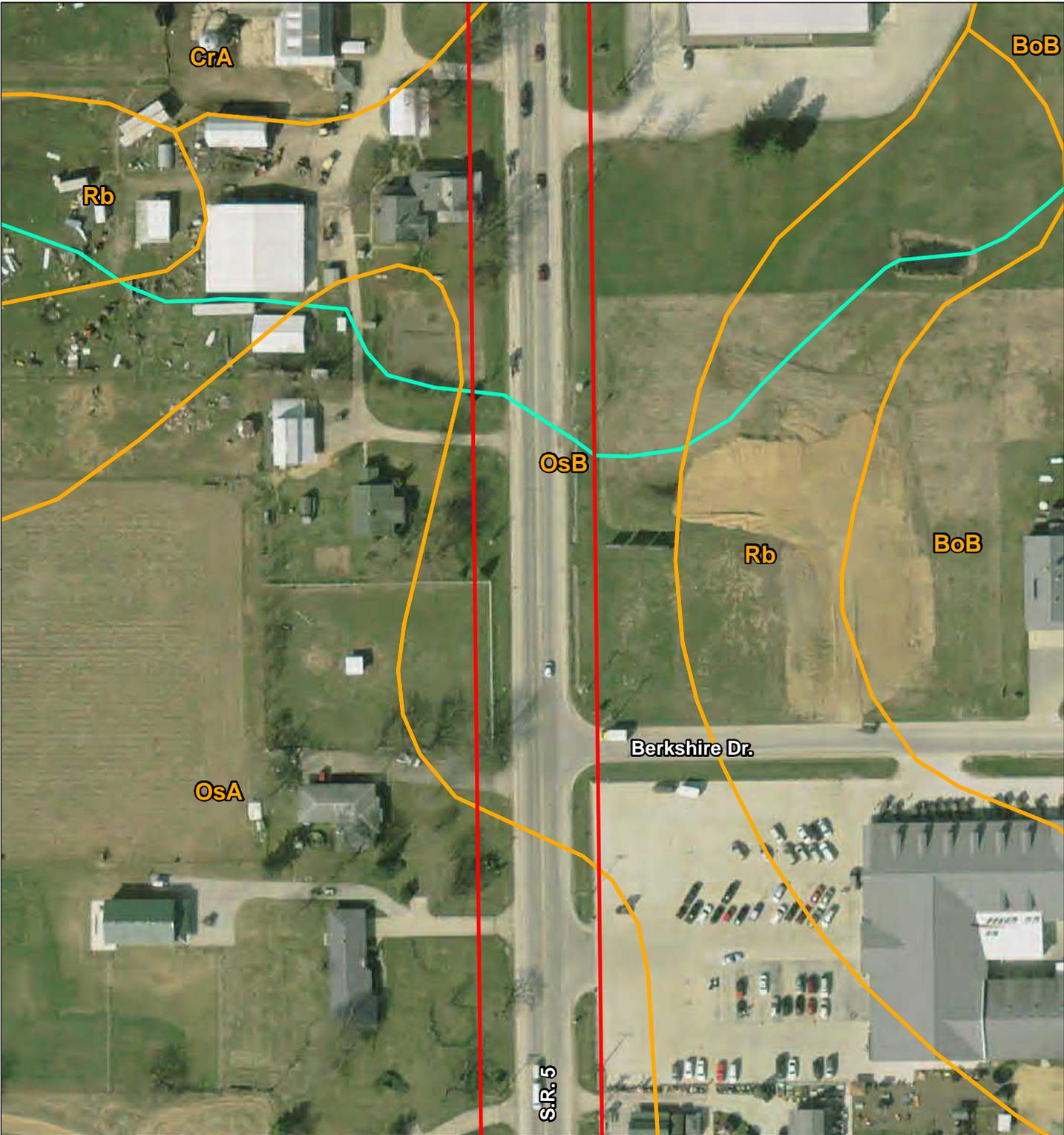


Project Study Limits (PSL)
  NWI Wetland
  NHD Stream
  NRCS Soil Survey

Exhibit 5 - NWI Wetland, NHD Stream, and  
 NRCS Soil Survey Map  
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Project Study Limits (PSL)
 
 NWI Wetland
 

 NHD Stream
 

 NRCS Soil Survey

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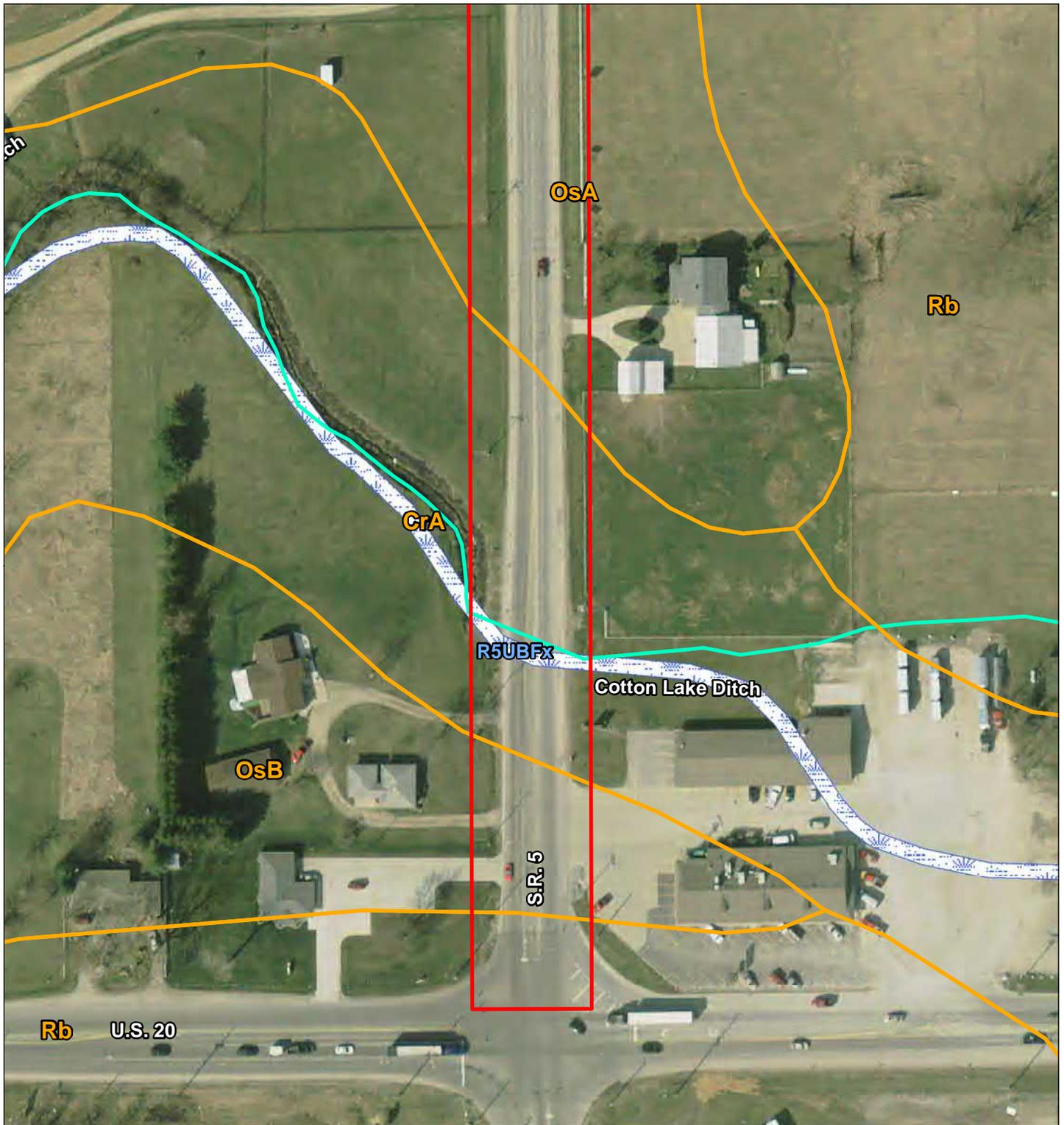
Project Study Limits (PSL)
  NWI Wetland
  NHD Stream
  NRCS Soil Survey

Exhibit 5 - NWI Wetland, NHD Stream, and  
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Exh. 5 page 10 of 12



Project Study Limits (PSL)
 
 NWI Wetland
 

 NHD Stream
 

 NRCS Soil Survey

Exhibit 5 - NWI Wetland, NHD Stream, and  
 NRCS Soil Survey Map  
 S.R. 5 from U.S. 20 to School Street  
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All locations approximate  
 Source: Indiana Spatial Data Portal (2012)



Exh. 5 page 11 of 12

Map unit symbol	Map unit name	Hydric Rating (%)
Gf	Gilford sandy loam, 0 to 2 percent slopes, gravelly subsoil	Hydric (95%)
Se	Sebewa loam, drained, 0 to 1 percent slopes	Hydric (95%)
Rb	Rensselaer loam, 0 to 1 percent slopes	Hydric (88%)
BxA	Bronson sandy loam, 0 to 3 percent slopes	Hydric (6%)
CrA	Conover loam, 0 to 3 percent slopes	Hydric (3%)
OsA	Oshtemo loamy sand, 0 to 2 percent slopes	Hydric (3%)
OsB	Oshtemo loamy sand, 2 to 6 percent slopes	Not Hydric
Ud	Udorthents, loamy	Not Hydric



Exhibit 5 - NWI Wetland, NHD Stream, and NRCS Soil Survey Map  
 S.R. 5 from U.S. 20 to School Street  
 Road Improvements  
 Newbury Township, LaGrange County, Indiana  
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 Map Author: Zachary Root

All locations approximate  
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Exh. 5 page 12 of 12

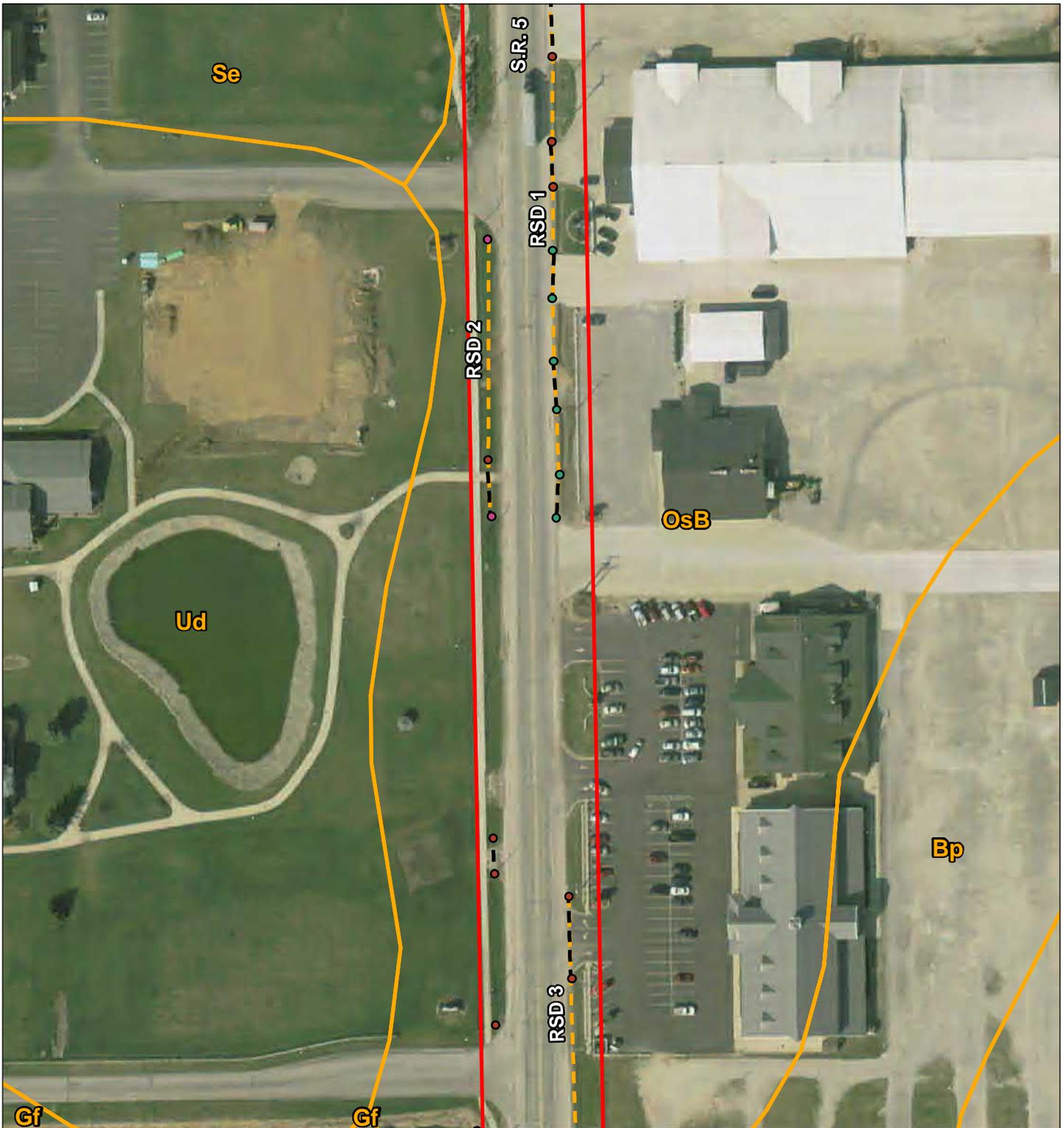


- |                            |                      |                                  |                         |                |
|----------------------------|----------------------|----------------------------------|-------------------------|----------------|
| Project Study Limits (PSL) | Wetland beyond PSL   | Culvert                          | Corrugated Metal Pipe   | Storm Drain    |
| Sampling Point             | Stream               | Concrete Culvert                 | Corrugated Plastic Pipe | Buried Culvert |
| Wetland - PEM1A            | Roadside Ditch (RSD) | Concrete Culvert Greater than 5' | Grated Culvert          |                |

Exhibit 6 - Waters Delineation and NRCS  
 Soil Survey Map  
 S.R. 5 from U.S. 20 to School Street  
 Road Improvements  
 Newbury Township, LaGrange County, Indiana  
 Des. No. 1700179  
 Metric Project No. 18-0046-7  
 Map Date:12/3/2018  
 Map Author: Cory Shumate

All locations approximate  
 Source: Indiana Spatial Data Portal (2012)





- |                            |                      |                                  |                         |                |
|----------------------------|----------------------|----------------------------------|-------------------------|----------------|
| Project Study Limits (PSL) | Wetland beyond PSL   | Culvert                          | Corrugated Metal Pipe   | Storm Drain    |
| Sampling Point             | Stream               | Concrete Culvert                 | Corrugated Plastic Pipe | Buried Culvert |
| Wetland - PEM1A            | Roadside Ditch (RSD) | Concrete Culvert Greater than 5' | Grated Culvert          |                |

Exhibit 6 - Waters Delineation and NRCS Soil Survey Map  
 S.R. 5 from U.S. 20 to School Street Road Improvements  
 Newbury Township, LaGrange County, Indiana  
 Des. No. 1700179  
 Metric Project No. 18-0046-7  
 Map Date: 12/3/2018  
 Map Author: Cory Shumate

All locations approximate  
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- |                            |                      |                                  |                         |                |
|----------------------------|----------------------|----------------------------------|-------------------------|----------------|
| Project Study Limits (PSL) | Wetland beyond PSL   | Culvert                          | Corrugated Metal Pipe   | Storm Drain    |
| Sampling Point             | Stream               | Concrete Culvert                 | Corrugated Plastic Pipe | Buried Culvert |
| Wetland - PEM1A            | Roadside Ditch (RSD) | Concrete Culvert Greater than 5' | Grated Culvert          |                |

Exhibit 6 - Waters Delineation and NRCS  
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 Newbury Township, LaGrange County, Indiana  
 Des. No. 1700179  
 Metric Project No. 18-0046-7  
 Map Date: 12/3/2018  
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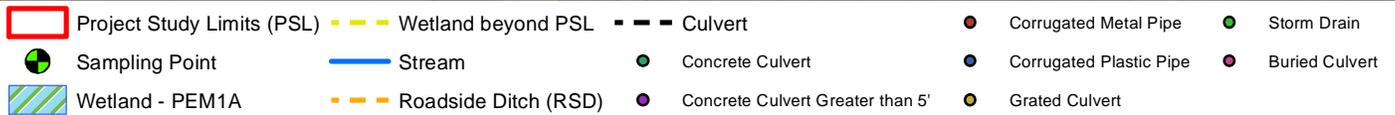
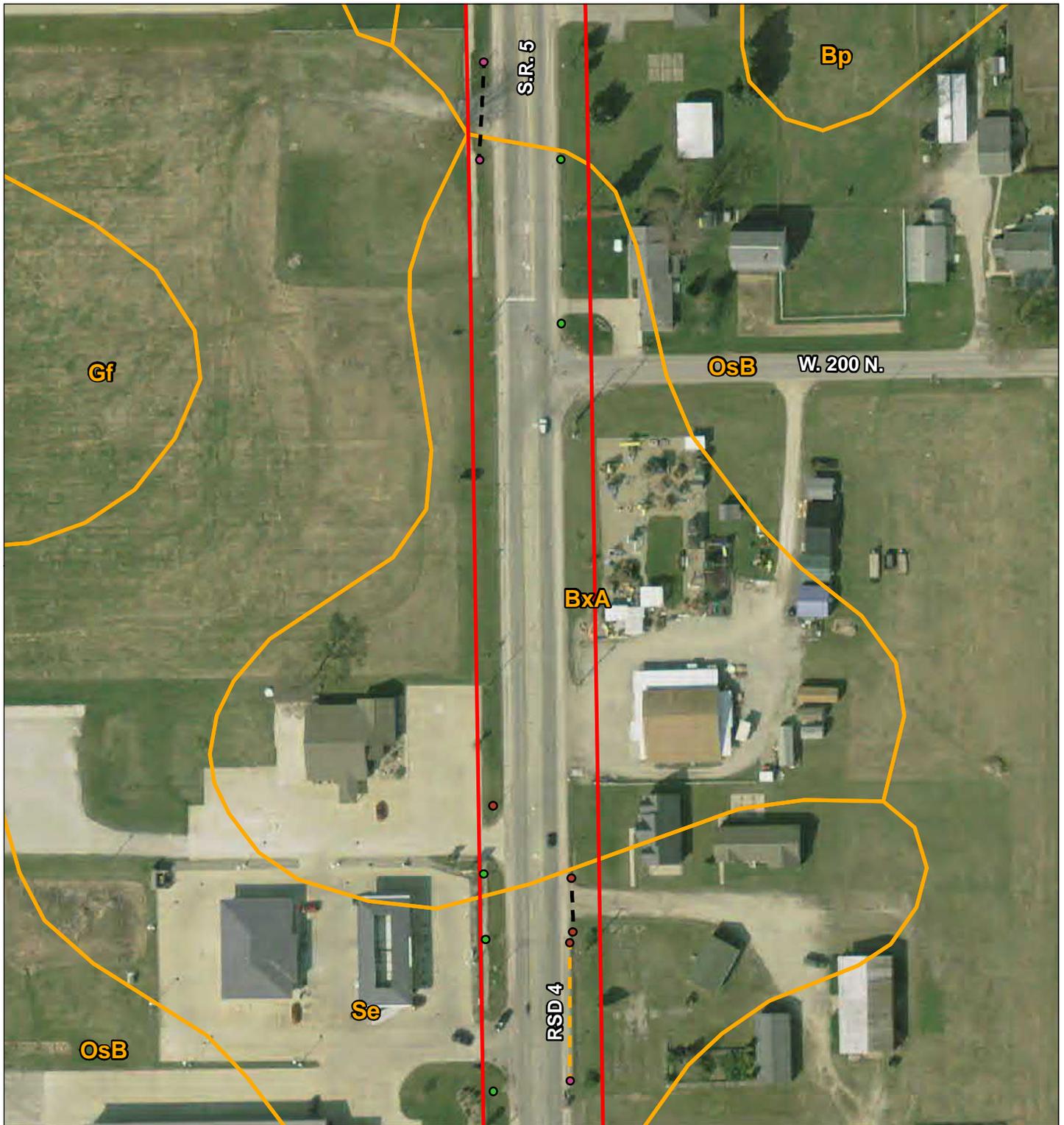
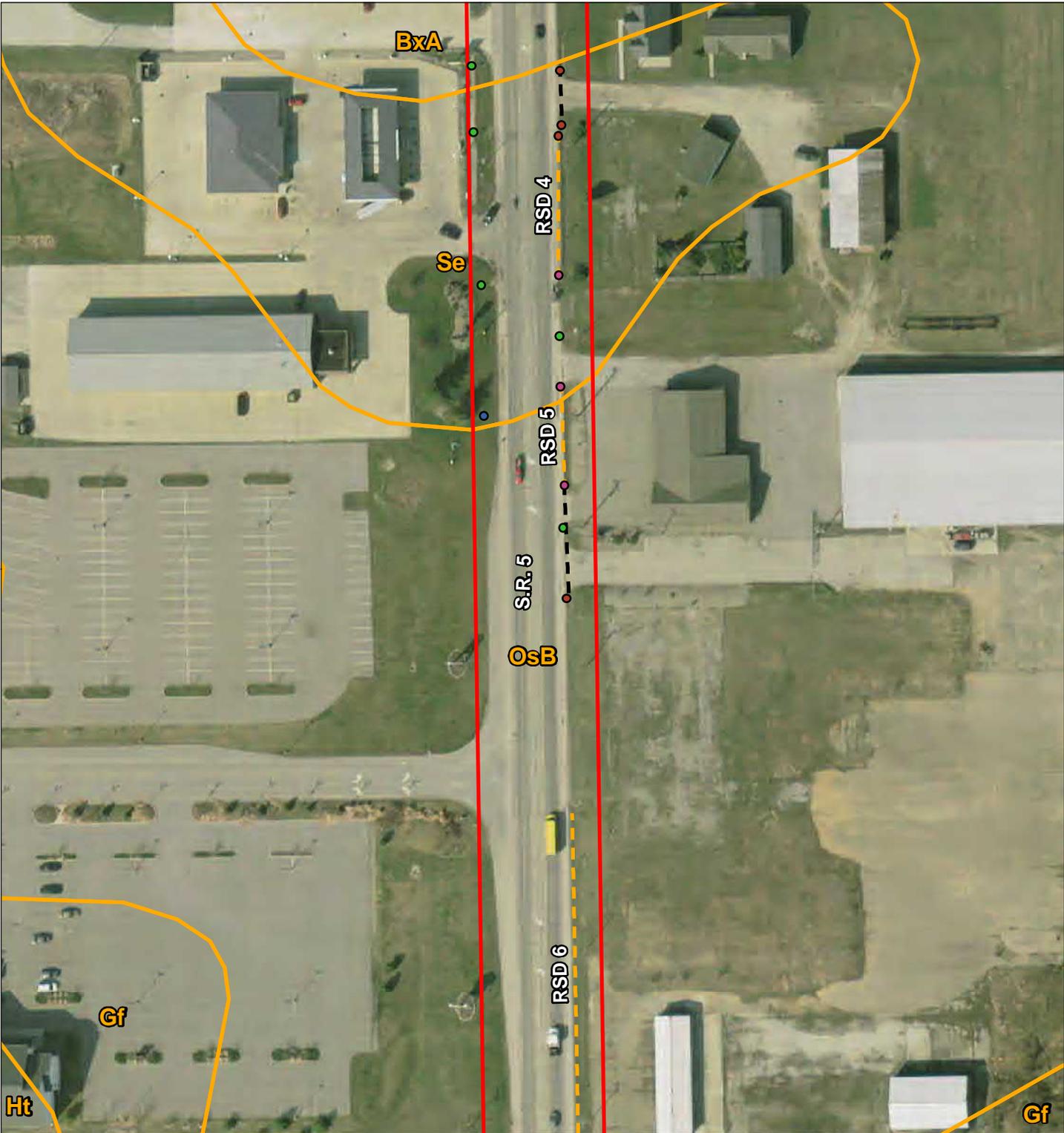


Exhibit 6 - Waters Delineation and NRCS  
 Soil Survey Map  
 S.R. 5 from U.S. 20 to School Street  
 Road Improvements  
 Newbury Township, LaGrange County, Indiana  
 Des. No. 1700179  
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All locations approximate  
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- |                            |                      |                                  |                         |                |
|----------------------------|----------------------|----------------------------------|-------------------------|----------------|
| Project Study Limits (PSL) | Wetland beyond PSL   | Culvert                          | Corrugated Metal Pipe   | Storm Drain    |
| Sampling Point             | Stream               | Concrete Culvert                 | Corrugated Plastic Pipe | Buried Culvert |
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Exhibit 6 - Waters Delineation and NRCS  
 Soil Survey Map  
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 Road Improvements  
 Newbury Township, LaGrange County, Indiana  
 Des. No. 1700179  
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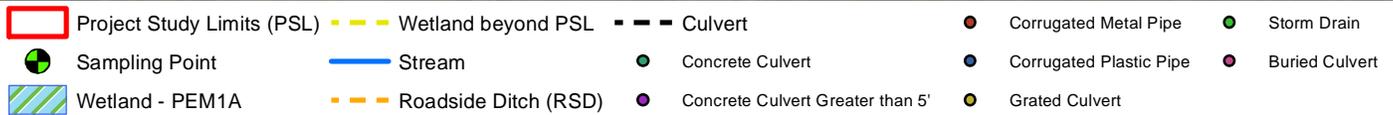
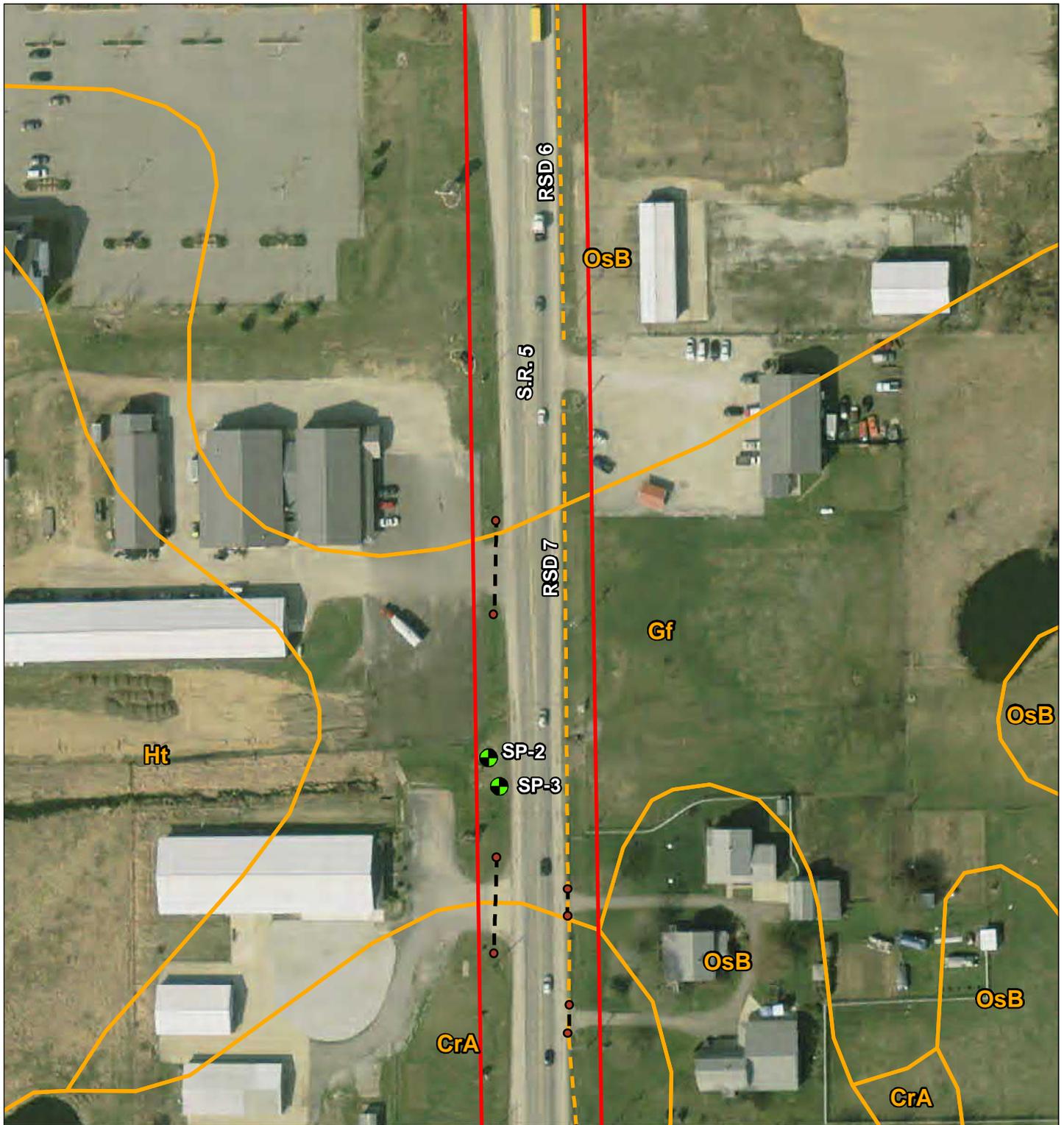
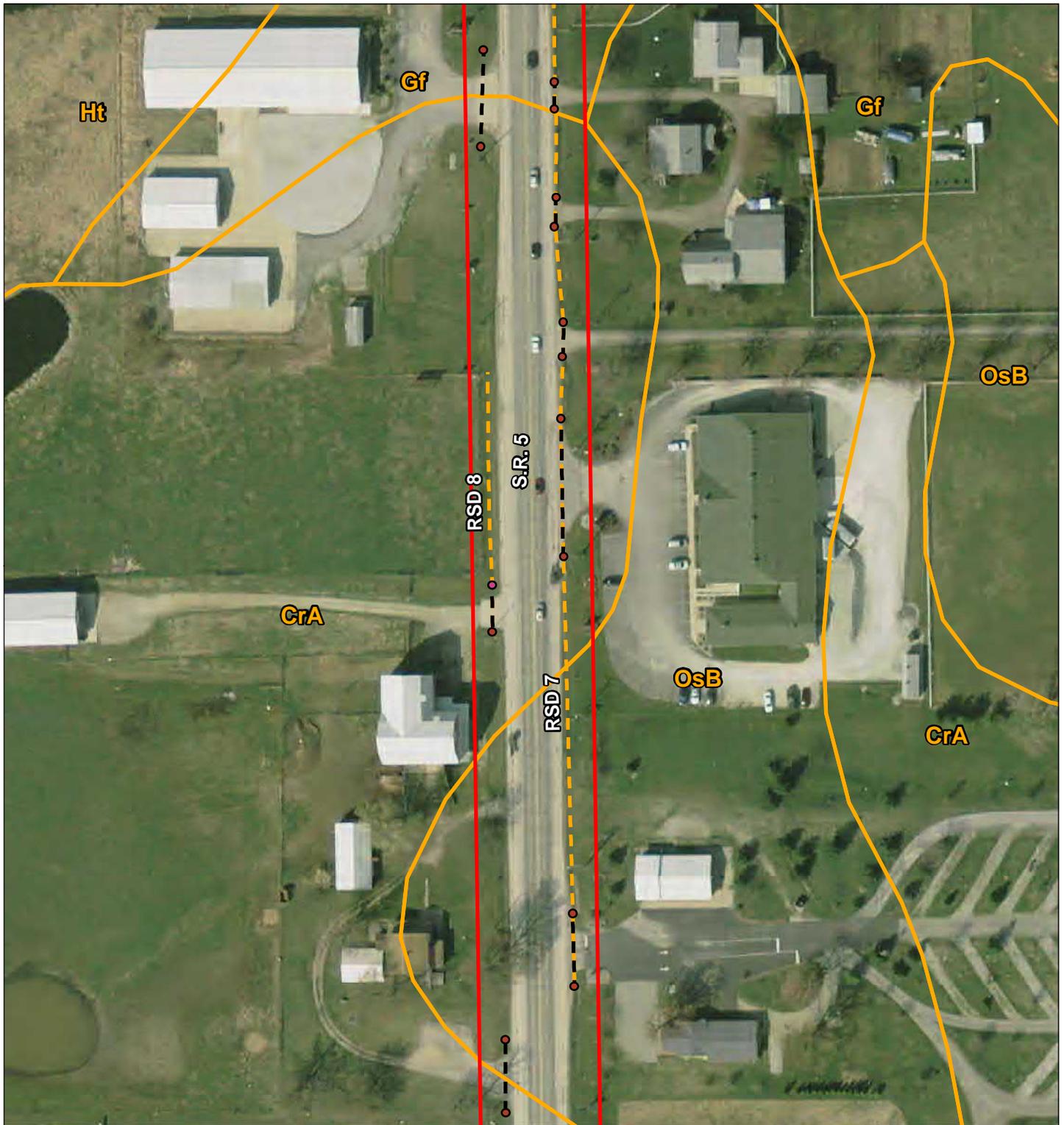


Exhibit 6 - Waters Delineation and NRCS  
Soil Survey Map  
S.R. 5 from U.S. 20 to School Street  
Road Improvements  
Newbury Township, LaGrange County, Indiana  
Des. No. 1700179  
Metric Project No. 18-0046-7  
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All locations approximate  
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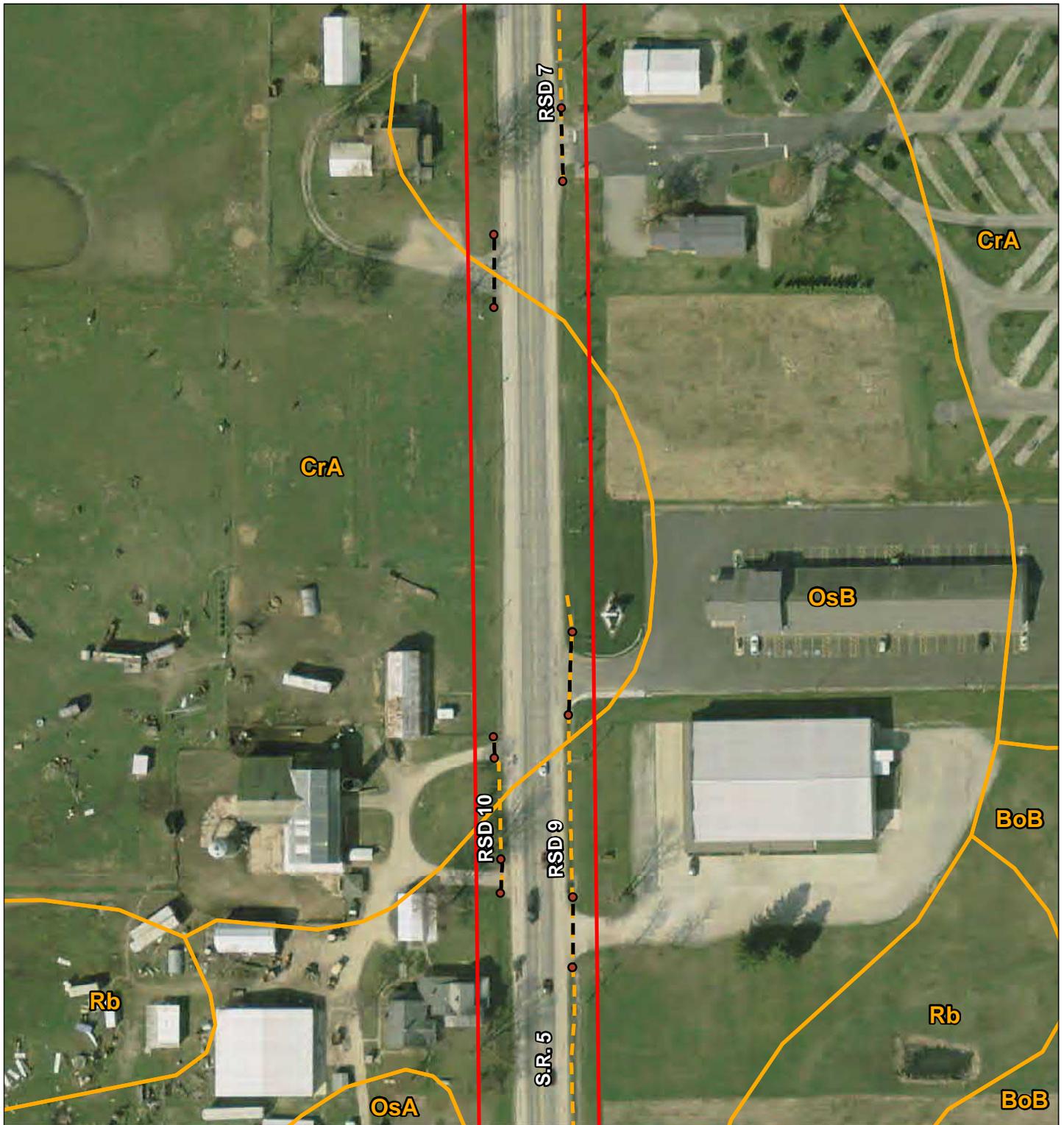


- |                            |                      |                                  |                         |                |
|----------------------------|----------------------|----------------------------------|-------------------------|----------------|
| Project Study Limits (PSL) | Wetland beyond PSL   | Culvert                          | Corrugated Metal Pipe   | Storm Drain    |
| Sampling Point             | Stream               | Concrete Culvert                 | Corrugated Plastic Pipe | Buried Culvert |
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Exhibit 6 - Waters Delineation and NRCS  
 Soil Survey Map  
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All locations approximate  
 Source: Indiana Spatial Data Portal (2012)



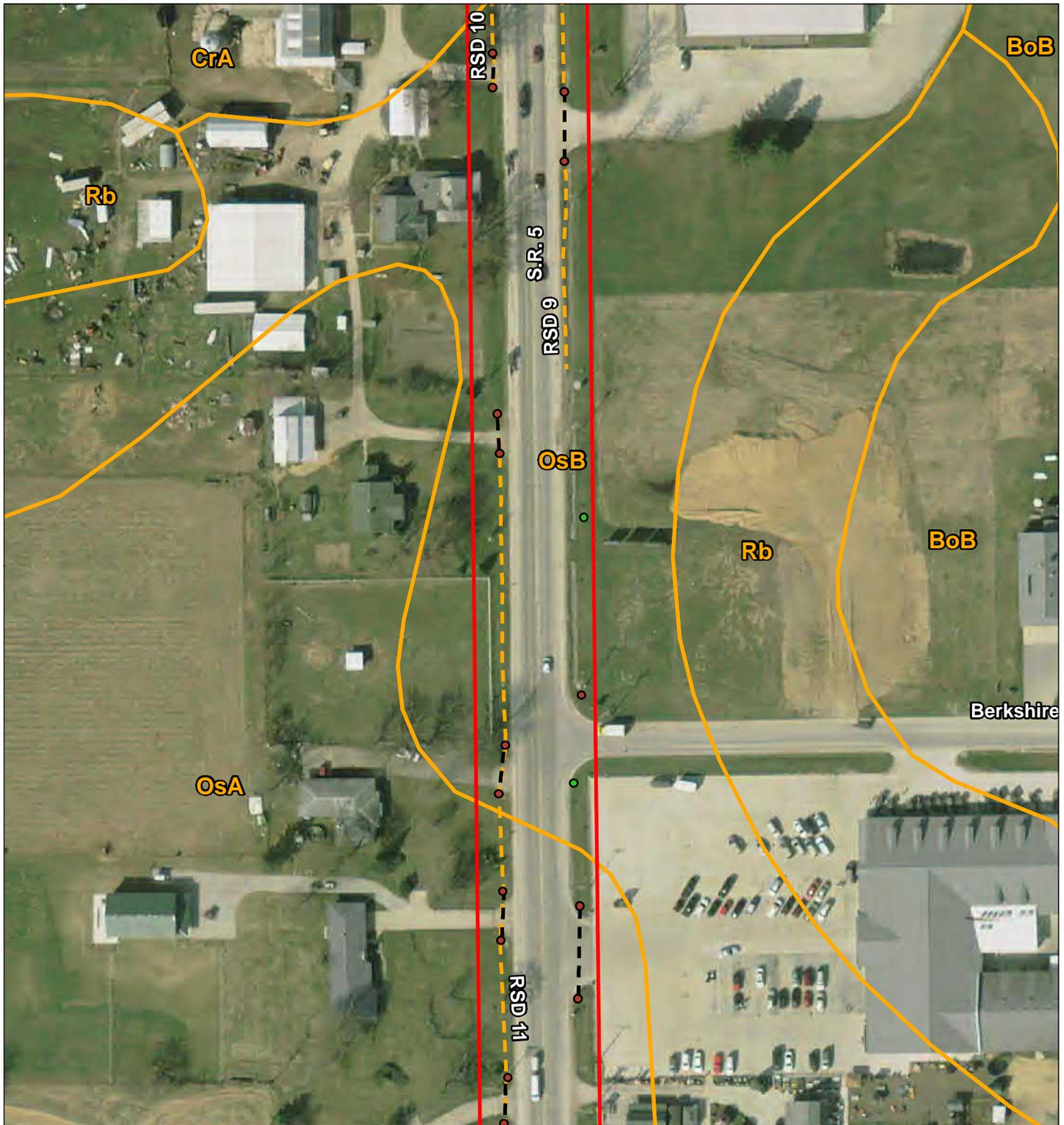


- |                            |                      |                                  |                         |                |
|----------------------------|----------------------|----------------------------------|-------------------------|----------------|
| Project Study Limits (PSL) | Wetland beyond PSL   | Culvert                          | Corrugated Metal Pipe   | Storm Drain    |
| Sampling Point             | Stream               | Concrete Culvert                 | Corrugated Plastic Pipe | Buried Culvert |
| Wetland - PEM1A            | Roadside Ditch (RSD) | Concrete Culvert Greater than 5' | Grated Culvert          |                |

Exhibit 6 - Waters Delineation and NRCS  
 Soil Survey Map  
 S.R. 5 from U.S. 20 to School Street  
 Road Improvements  
 Newbury Township, LaGrange County, Indiana  
 Des. No. 1700179  
 Metric Project No. 18-0046-7  
 Map Date: 12/3/2018  
 Map Author: Cory Shumate

All locations approximate  
 Source: Indiana Spatial Data Portal (2012)





- |                            |                      |                                  |                         |                |
|----------------------------|----------------------|----------------------------------|-------------------------|----------------|
| Project Study Limits (PSL) | Wetland beyond PSL   | Culvert                          | Corrugated Metal Pipe   | Storm Drain    |
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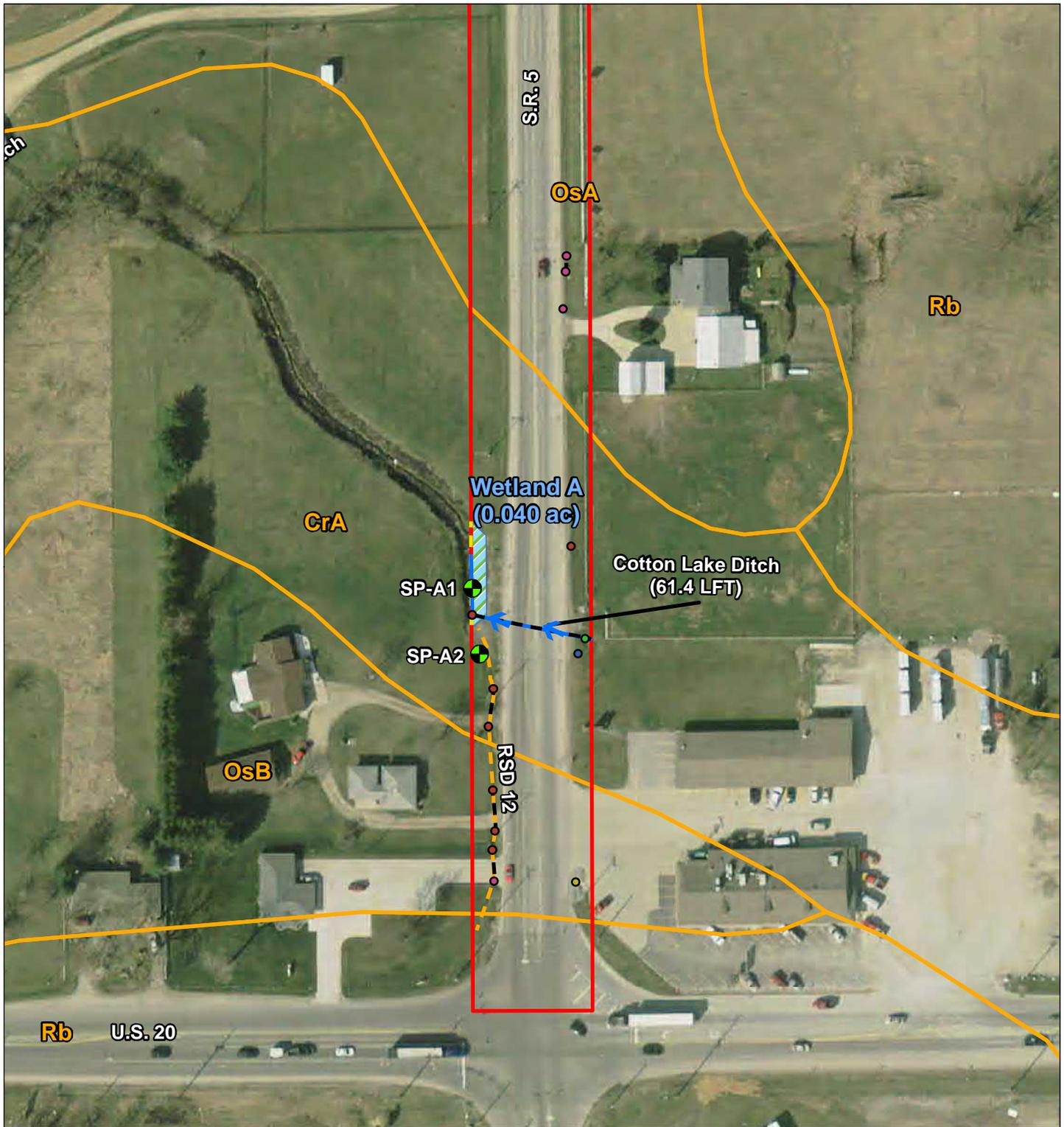
- |                            |                      |                                  |                         |                |
|----------------------------|----------------------|----------------------------------|-------------------------|----------------|
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Exh. 6 page 10 of 12



- |                            |                      |                                  |                         |                |
|----------------------------|----------------------|----------------------------------|-------------------------|----------------|
| Project Study Limits (PSL) | Wetland beyond PSL   | Culvert                          | Corrugated Metal Pipe   | Storm Drain    |
| Sampling Point             | Stream               | Concrete Culvert                 | Corrugated Plastic Pipe | Buried Culvert |
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Map unit symbol	Map unit name	Hydric Rating (%)
Gf	Gilford sandy loam, 0 to 2 percent slopes, gravelly subsoil	Hydric (95%)
Se	Sebewa loam, drained, 0 to 1 percent slopes	Hydric (95%)
Rb	Rensselaer loam, 0 to 1 percent slopes	Hydric (88%)
BxA	Bronson sandy loam, 0 to 3 percent slopes	Hydric (6%)
CrA	Conover loam, 0 to 3 percent slopes	Hydric (3%)
OsA	Oshtemo loamy sand, 0 to 2 percent slopes	Hydric (3%)
OsB	Oshtemo loamy sand, 2 to 6 percent slopes	Not Hydric
Ud	Udorthents, loamy	Not Hydric



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 Map Author: Cory Shumate

All locations approximate  
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Exh. 6 page 12 of 12

**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: S.R. 5 from U.S. 20 to School St. (Des. No. 1700179) City/County: Shipshewana/ LaGrange County Sampling Date: 9/20/2018  
 Applicant/Owner: INDOT State: IN Sampling Point: SP-A1  
 Investigator(s): Zachary Root Section, Township, Range: S: 15, T: 37 N, R: 8 E  
 Landform (hillside, terrace, etc.): Bank of Cotton Lake Ditch Local relief (concave, convex, none): Concave Slope %: 0  
 Subregion (LRR or MLRA): LRR L Lat: 41.655625 Long: -85.580427 Datum: NAD83  
 Soil Map Unit Name: CrA - Conover loam (3% hydric) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u> Hydric Soil Present? Yes <u>X</u> No <u>    </u> Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>    </u> If yes, optional Wetland Site ID: <u>Wetland A</u>
Remarks: (Explain alternative procedures here or in a separate report.) Wetland A (PEM1A) sampling point.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
---	---

<b>Field Observations:</b> Surface Water Present? Yes <u>X</u> No <u>    </u> Depth (inches): <u>2</u> Water Table Present? Yes <u>X</u> No <u>    </u> Depth (inches): <u>0</u> Saturation Present? Yes <u>X</u> No <u>    </u> Depth (inches): <u>0</u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No <u>    </u>
---	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
 Sampling point was located in a concave depression located on the bank of UNT 1.

**VEGETATION** – Use scientific names of plants.

Sampling Point: SP-A1

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr><td>OBL species <u>10</u></td><td>x 1 = <u>10</u></td></tr> <tr><td>FACW species <u>25</u></td><td>x 2 = <u>50</u></td></tr> <tr><td>FAC species <u>5</u></td><td>x 3 = <u>15</u></td></tr> <tr><td>FACU species <u>20</u></td><td>x 4 = <u>80</u></td></tr> <tr><td>UPL species <u>0</u></td><td>x 5 = <u>0</u></td></tr> <tr><td>Column Totals: <u>60</u></td><td>(A) <u>155</u> (B)</td></tr> <tr><td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.58</u></td></tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>10</u>	x 1 = <u>10</u>	FACW species <u>25</u>	x 2 = <u>50</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>20</u>	x 4 = <u>80</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>60</u>	(A) <u>155</u> (B)	Prevalence Index = B/A = <u>2.58</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>10</u>	x 1 = <u>10</u>																			
FACW species <u>25</u>	x 2 = <u>50</u>																			
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FACU species <u>20</u>	x 4 = <u>80</u>																			
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Prevalence Index = B/A = <u>2.58</u>																				
_____ =Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Herb Stratum</u> (Plot size: _____)																				
1. <u>Phalaris arundinacea</u>	20	Yes	FACW																	
2. <u>Typha angustifolia</u>	10	Yes	OBL																	
3. <u>Impatiens capensis</u>	5	No	FACW																	
4. <u>Urtica dioica</u>	5	No	FAC																	
5. <u>Ambrosia artemisiifolia</u>	5	No	FACU																	
6. <u>Cirsium arvense</u>	5	No	FACU																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: _____)																				
1. <u>Parthenocissus quinquefolia</u>	10	Yes	FACU																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				

**Hydrophytic Vegetation Indicators:**  
 \_\_\_ 1 - Rapid Test for Hydrophytic Vegetation  
 2 - Dominance Test is >50%  
 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 \_\_\_ 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 \_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**  
**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes       No \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)





**VEGETATION** – Use scientific names of plants.

Sampling Point: SP-A2

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover				<b>Prevalence Index worksheet:</b> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:50%;">Total % Cover of:</th> <th style="width:50%;">Multiply by:</th> </tr> </thead> <tbody> <tr><td>OBL species <u>0</u></td><td>x 1 = <u>0</u></td></tr> <tr><td>FACW species <u>0</u></td><td>x 2 = <u>0</u></td></tr> <tr><td>FAC species <u>0</u></td><td>x 3 = <u>0</u></td></tr> <tr><td>FACU species <u>110</u></td><td>x 4 = <u>440</u></td></tr> <tr><td>UPL species <u>0</u></td><td>x 5 = <u>0</u></td></tr> <tr><td>Column Totals: <u>110</u> (A)</td><td><u>440</u> (B)</td></tr> <tr><td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4.00</u></td></tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>110</u>	x 4 = <u>440</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>110</u> (A)	<u>440</u> (B)	Prevalence Index = B/A = <u>4.00</u>	
Total % Cover of:	Multiply by:																			
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FACW species <u>0</u>	x 2 = <u>0</u>																			
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Prevalence Index = B/A = <u>4.00</u>																				
_____ =Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Herb Stratum</u> (Plot size: _____)																				
1. <u>Poa pratensis</u>	<u>100</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Plantago lanceolata</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
3. <u>Trifolium repens</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				

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\_\_\_ 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

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**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes           No X

Remarks: (Include photo numbers here or on a separate sheet.)





**VEGETATION** – Use scientific names of plants.

Sampling Point: SP-1

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
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FACW species <u>10</u>	x 2 = <u>20</u>																			
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Column Totals: <u>57</u> (A)	<u>203</u> (B)																			
Prevalence Index = B/A = <u>3.56</u>																				
_____ =Total Cover																				
<u>Sapling/Shrub Stratum</u> (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Herb Stratum</u> (Plot size: _____)																				
1. <u>Poa pratensis</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Persicaria pensylvanica</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Oxalis stricta</u>	<u>7</u>	<u>Yes</u>	<u>FACU</u>																	
4. <u>Trifolium repens</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
5. <u>Echinochloa crus-galli</u>	<u>5</u>	<u>No</u>	<u>FAC</u>																	
6. <u>Taraxacum officinale</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
7. <u>Sinapis arvensis</u>	<u>5</u>	<u>No</u>	<u>NI</u>																	
8. <u>Chamaesyce maculata</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
_____ =Total Cover																				
<u>Woody Vine Stratum</u> (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
_____ =Total Cover																				

**Hydrophytic Vegetation Indicators:**  
 \_\_\_ 1 - Rapid Test for Hydrophytic Vegetation  
 \_\_\_ 2 - Dominance Test is >50%  
 \_\_\_ 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 \_\_\_ 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 \_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**  
**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes           No   X  

Remarks: (Include photo numbers here or on a separate sheet.)

**SOIL**

Sampling Point SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 3/2	100					Sandy	Sandy loam
5-13	10YR 3/2	95	7.5YR 5/6	5	C	M	Sandy	Sandy loam; Prominent mottles
13-20	10YR 3/2	90	5YR 4/6	10	C	M	Sandy	Sandy loam; Prominent mottles

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soil Indicators:</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> High Chroma Sands (S11) (LRR K, L)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)	
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	<input type="checkbox"/> Red Parent Material (F21)	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Marl (F10) (LRR K, L)	<input type="checkbox"/> Very Shallow Dark Surface (F22)	
<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Dark Surface (S7)			

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b>	<b>Hydric Soil Present?</b>
Type: _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth (inches): _____	

Remarks:  
 This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. ([http://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcs142p2\\_051293.docx](http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx))



**VEGETATION** – Use scientific names of plants.

Sampling Point: SP-2

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
	=Total Cover			<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:right">Total % Cover of:</td> <td style="width:50%; text-align:left">Multiply by:</td> </tr> <tr> <td>OBL species <u>20</u></td> <td>x 1 = <u>20</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>40</u></td> <td>x 3 = <u>120</u></td> </tr> <tr> <td>FACU species <u>20</u></td> <td>x 4 = <u>80</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>80</u> (A)</td> <td><u>220</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center">Prevalence Index = B/A = <u>2.75</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>20</u>	x 1 = <u>20</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>40</u>	x 3 = <u>120</u>	FACU species <u>20</u>	x 4 = <u>80</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>80</u> (A)	<u>220</u> (B)	Prevalence Index = B/A = <u>2.75</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>20</u>	x 1 = <u>20</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>40</u>	x 3 = <u>120</u>																			
FACU species <u>20</u>	x 4 = <u>80</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>80</u> (A)	<u>220</u> (B)																			
Prevalence Index = B/A = <u>2.75</u>																				
<u>Sapling/Shrub Stratum</u> (Plot size: _____)				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
	=Total Cover			<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. <b>Definitions of Vegetation Strata:</b> <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vines</b> – All woody vines greater than 3.28 ft in height. <b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____																
<u>Herb Stratum</u> (Plot size: _____)																				
1. <u>Typha angustifolia</u>	<u>20</u>	<u>Yes</u>	<u>OBL</u>																	
2. <u>Urtica dioica</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>																	
3. <u>Solanum dulcamara</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>																	
4. <u>Nepeta cataria</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
5. <u>Cirsium arvense</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
6. <u>Arctium minus</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
	<u>80</u> =Total Cover																			
<u>Woody Vine Stratum</u> (Plot size: _____)																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
	=Total Cover																			

Remarks: (Include photo numbers here or on a separate sheet.)





**VEGETATION** – Use scientific names of plants.

Sampling Point: SP-3

<u>Tree Stratum</u> (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
				=Total Cover
<u>Sapling/Shrub Stratum</u> (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
				=Total Cover
<u>Herb Stratum</u> (Plot size: _____)				
1. <u>Poa pratensis</u>	90	Yes	FACU	
2. <u>Taraxacum officinale</u>	2	No	FACU	
3. <u>Trifolium repens</u>	2	No	FACU	
4. <u>Plantago major</u>	2	No	FACU	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
				96 =Total Cover
<u>Woody Vine Stratum</u> (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
				=Total Cover

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>96</u>	x 4 = <u>384</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>96</u> (A)	<u>384</u> (B)
Prevalence Index = B/A = <u>4.00</u>	

**Hydrophytic Vegetation Indicators:**

   1 - Rapid Test for Hydrophytic Vegetation

   2 - Dominance Test is >50%

   3 - Prevalence Index is ≤3.0<sup>1</sup>

   4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

   Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Vegetation Strata:**

**Tree** – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/shrub** – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vines** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes         No   X

Remarks: (Include photo numbers here or on a separate sheet.)



**Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM**

**BACKGROUND INFORMATION**

**A. REPORT COMPLETION DATE FOR PJD:** May 9, 2019

**B. NAME AND ADDRESS OF PERSON REQUESTING PJD:**

Cory Shumate  
Metric Environmental, LLC  
6971 Hillsdale Court  
Indianapolis, IN 46250  
317-350-4896  
corys@metricenv.com

**C. DISTRICT OFFICE, FILE NAME, AND NUMBER:**

**D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:**

The proposed project includes the construction of auxiliary lanes and two-way left turn lanes along S.R. 5 from U.S. 20 to School St., approximately 1.5 miles in length in Shipshewana, Newbury Township, LaGrange County, Indiana. Specifically, the project is located in Section 11 and 15, Township 37 North, Range 8 East of the Shipshewana, Indiana 7.5-minute United States Geological Survey topographic quadrangle.

**(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)**

State: IN County/parish/borough: LaGrange County City: Shipshewana  
Center coordinates of site (lat/long in degree decimal format):  
Lat.: 41.664886°  
Long.: -85.580386°  
Universal Transverse Mercator: 16 N 4613543.41 E 618185.32  
Name of nearest waterbody: Cotton Lake Ditch

**E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):**

- Office (Desk) Determination. Date:  
 Field Determination. Date(s):

**TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH “MAY BE” SUBJECT TO REGULATORY JURISDICTION.**

<b>Site number</b>	<b>Latitude (decimal degrees)</b>	<b>Longitude (decimal degrees)</b>	<b>Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)</b>	<b>Type of aquatic resource (i.e., wetland vs. non-wetland waters)</b>	<b>Geographic authority to which the aquatic resource “may be” subject (i.e., Section 404 or Section 10/404)</b>
<b>Wetland A</b>	41.653964	-85.679518	0.040 ac	Wetland	Section 10/404
<b>Cotton Lake Ditch</b>	41.655546	-85.580312	61.4 LFT	Non-wetland Waters	Section 10/404

- 1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.
- 2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there "*may be*" waters of the U.S. and/or that there "*may be*" navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

**SUPPORTING DATA. Data reviewed for PJD (check all that apply)**

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

- Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
  - Map: \_\_\_\_\_ Dated April/8/2019
  - Data sheets prepared/submitted by or on behalf of the PJD requestor.
    - Office concurs with data sheets/delineation report.
    - Office does not concur with data sheets/delineation report. Rationale: \_\_\_\_\_
- Data sheets prepared by the Corps: \_\_\_\_\_
- Corps navigable waters' study: \_\_\_\_\_
- U.S. Geological Survey Hydrologic Atlas: \_\_\_\_\_
  - USGS NHD data.
  - USGS 8 and 12 digit HUC maps.
- U.S. Geological Survey map(s). Cite scale & quad name: Middlebury, IN 7.5 min Quad, 1996
  
- Natural Resources Conservation Service Soil Survey. Citation: SSURGO LaGrange County
  
- National wetlands inventory map(s). Cite name: http://www.fws.gov/wetlands/
- State/local wetland inventory map(s): \_\_\_\_\_
- FEMA/FIRM maps: ; Effective \_\_\_\_\_
  
- 100-year Floodplain Elevation is: \_\_\_\_\_.(National Geodetic Vertical Datum of 1929)
- Photographs:  Aerial (Name & Date): Indiana Aerial Photograph, 2012  
or  Other (Name & Date): Site Photographs, 9/20/2018
- Previous determination(s). File no. and date of response letter: \_\_\_\_\_
- Other information (please specify): \_\_\_\_\_

**IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.**

\_\_\_\_\_  
Signature and date of  
Regulatory staff member  
completing PJD

 5/9/2019  
\_\_\_\_\_  
Signature and date of  
person requesting PJD  
(REQUIRED, unless obtaining  
the signature is impracticable)<sup>1</sup>

<sup>1</sup> Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

## Alex Gray

---

**From:** Sperry, Steve <SSPERRY@indot.IN.gov>  
**Sent:** Tuesday, June 23, 2020 11:05 AM  
**To:** James, Karen  
**Cc:** Curry, Jennifer; Couch, Gregory; Samantha Wickizer; Amy Smith; Alex Gray; Jessica Peterson; Rape, Marc; Seculoff, Steven  
**Subject:** Preliminary Permit Determination for: Des # 1700179, SR 5 Auxiliary Lanes, From US 20 to School Street, 1.43 miles N of US 20 (Shipshewana), LaGrange Co. RFC: per SPMS 11/3/2021

**External Message:** *This message originated outside of Metric Environmental.  
Do not click links or open attachments unless you recognize the sender and know the content is safe.*

**Karen,**

A preliminary permit determinations has been completed for this project. Based on X consultant responses to the questionnaire and provided plans. I have determined that the following permits will likely be required:

### **404/401**

- A **401 RGP** will be required since this is not a maintenance project nor does it qualify for NWP 33. Impacts are less than 500 lf of waterway and 0.25 of wetland or other waters and therefore does not require an IP . It meets all conditions of the Corps and IDEM RGP. State Form 51937 can be used for both the 404 and 401 application. This application should be submitted to this Office at least 4 months prior to the project RFC date.

### **CIF**

Based on the information available for review, this project will not require a CIF permit. While not a bridge project the road widening is not within a floodway and therefore will not require a CIF.

### **County Regulated drain**

A legal drain permit will be required for this project. The designer should conduct early coordination with the county surveyor. The permit application will need to be submitted to this Office 4 months prior to RFC for review and submittal.

### **Rule 5**

A Rule 5 permit will be required because the estimated soil disturbance is greater than one acre (4.286 acres). This Rule 5 application will need to be submitted to the Storm Water sections at least 4 months prior to the RFC

The preliminary plans, completed questionnaire and the PPD have been posted to ProjectWise

*We are providing this **preliminary** permit determination based on the information available at the time of the review. **If the project scope, plans and/or impacts change the designer should contact EWPO for an updated permit determination.** A final permit determination will be undertaken when the applications listed above have been received by this Office. .*

Should you have any questions or need additional information please contact me.

Thanks  
Steve

**Stephen C. Sperry**

***Ecology and Permits Coordinator***

Multidistrict East Team

**INDOT**, *Division of Environmental Services*

*IGCN Room 642*

100 N. Senate Ave.

Indianapolis, IN 46204

**Cell:** (317) 366-3457

**Office:** (317) 232-5206

**Email:** [ssperry@indot.in.gov](mailto:ssperry@indot.in.gov)



# **APPENDIX G: Public Involvement**

# **APPENDIX H: Air Quality**

Indiana Department of Transportation (INDOT)

State Preservation and Local Initiated Projects FY 2018 - 2021

SPONSOR	CONTRACT # / LEAD DES	STIP NAME	ROUTE	WORK TYPE	LOCATION	DISTRICT	MILES	FEDERAL CATEGORY	Estimated Cost left to Complete Project*	PROGRAM	PHASE	FEDERAL	MATCH	2018	2019	2020	2021
<b>LaGrange County</b>																	
	34886 / 1298231	A 04	US 20	Pavement, Other	From 0.47 miles W of SR 9 to 0.18 miles E of SR 9 (Lagrange)	Fort Wayne	.592	NHPP	\$1,770,000.00	Road ROW	RW	\$69,184.00	\$17,296.00	\$86,480.00			
Comments: NO MPO. Adding RW to FY 2018 into FY 2018 - 2021 STIP.																	
	38558 / 1700250	A 04	US 20	HMA Overlay, Preventive Maintenance	From 0.18 miles E of SR 9 to 1.05 miles W of SR 327	Fort Wayne	11.358	NHPP	\$4,255,000.00	Road Consulting	PE	\$266,400.00	\$66,600.00	\$333,000.00			
Comments: NO MPO. Adding PE to FY 2018 into FY 2018 - 2021 STIP.																	
	40473 / 1601983	A 04	US 20	Small Structure Replacement	Carrying Stoner Ditch #10, 1.40 miles E of SR 9	Fort Wayne	.2	NHPP	\$267,000.00	Bridge ROW	RW	\$10,000.00	\$2,500.00				\$12,500.00
Comments: NO MPO. Adding PE to FY 2018, and PE to FY 2019, and RW to FY 2021 into FY 2018 - 2021 STIP.																	
	40477 / 1700092	A 04	US 20	Intersect. Improv. W/ Added Turn Lanes	US 20 at CR 600 W, 2.66 miles East of SR 5	Fort Wayne	.46	Safety	\$645,000.00	Safety Consulting	PE	\$120,000.00	\$30,000.00	\$50,000.00	\$100,000.00		
Comments: NO MPO. Adding PE to FY 2018 and PE to FY 2019, and RW to FY 2021 into FY 2018 - 2021 STIP.																	
	40477 / 1700179	A 04	SR 5	Auxiliary Lanes, Two-way Left Turn Lanes	From US 20 to School Street, 1.43 miles N of US 20 (Shipshewana)	Fort Wayne	1.42	Safety	\$4,950,000.00	Safety ROW	RW	\$12,000.00	\$3,000.00				\$15,000.00
Comments: NO MPO. Adding PE to FY 2018, and PE to FY 2019, and RW to FY 2021 into FY 2018 - 2021 STIP.																	

**LaGrange County Total**

Federal: \$1,217,584.00      Match: \$304,396.00      2018: \$689,480.00      2019: \$800,000.00      2020:      2021: \$32,500.00

\*Estimated Costs left to Complete Project column is for costs that may extend beyond the four years of a STIP. This column is not fiscally constrained and is for information purposes.

Indiana Department of Transportation (INDOT)

State Preservation and Local Initiated Projects FY 2020 - 2024

SPONSOR	CONTR ACT # / LEAD DES	STIP NAME	ROUTE	WORK TYPE	LOCATION	DISTRICT	MILES	FEDERAL CATEGORY	Estimated Cost left to Complete Project*	PROGRAM	PHASE	FEDERAL	MATCH	2020	2021	2022	2023	2024
<b>LaGrange County</b>																		
LaGrange County	1592920	Init.	VA VARI	Bridge Inspections	Countywide Bridge Inspection and Inventory Program for Cycle Years 2017-2020	Fort Wayne	0	Multiple		Local Bridge Program	PE	\$33,911.39	\$0.00	\$33,911.39				
										Local Funds	PE	\$0.00	\$8,477.85	\$8,477.85				
Indiana Department of Transportation	38558 / 1700250	Init.	US 20	HMA Overlay, Preventive Maintenance	From 0.18 miles E of SR 9 to 1.05 miles W of SR 327	Fort Wayne	11.358	STPBG		Road Construction	CN	\$4,143,960.00	\$1,035,990.00	\$5,179,950.00				
Indiana Department of Transportation	39913 / 1383492	Init.	SR 5	HMA Overlay Minor Structural	From 2.57 miles S of SR 120 to SR 120	Fort Wayne	2.529	STPBG		Road Construction	CN	\$5,165,356.00	\$1,291,339.00		\$6,456,695.00			
										Bridge ROW	RW	\$128,000.00	\$32,000.00	\$160,000.00				
										Bridge Construction	CN	\$3,962,722.40	\$990,680.60		\$4,953,403.00			
Indiana Department of Transportation	39913 / 1600498	A 17	US 20	Small Structure Replacement	Structure carries East Buck Creek, 6.6 miles E of SR 5	Fort Wayne		NHPP	\$1,387,887.00	Toll Lease Amendment Proceeds	RW	\$44,000.00	\$11,000.00	\$55,000.00				
										Toll Lease Amendment Proceeds	CN	\$938,381.60	\$234,595.40		\$1,172,977.00			
Comments:NO MPO. DES 1600498 add RW to FY 2020 for \$55,000, CN to FY 2021 for \$1,172,977.																		
Indiana Department of Transportation	40477 / 1700179	Init.	SR 5	Auxiliary Lanes, Two-way Left Turn Lanes	From US 20 to School Street, 1.43 miles N of US 20(Shipshewana)	Fort Wayne	1.42	STPBG		Safety ROW	RW	\$48,000.00	\$12,000.00		\$25,000.00	\$35,000.00		
										Safety Construction	CN	\$4,489,534.40	\$1,122,383.60			\$5,611,918.00		
										Road ROW	RW	\$16,000.00	\$4,000.00		\$20,000.00			
										Bridge ROW	RW	\$144,000.00	\$36,000.00		\$55,000.00	\$125,000.00		
										Bridge Construction	CN	\$4,443,974.40	\$1,110,993.60		\$12,500.00	\$5,542,468.00		
										Safety - ROW	RW	\$12,000.00	\$3,000.00			\$15,000.00		
Indiana Department of Transportation	41108 / 1800550	Init.	US 20	HMA Overlay, Preventive Maintenance	From SR 5 to 0.35 Miles West of SR 9 (West Limit Lagrange)	Fort Wayne	8.439	STPBG		Road Construction	CN	\$2,424,860.00	\$606,215.00		\$3,031,075.00			
Lagrange	41148 / 1702844	Init.	ST 1010	Pavement Replacement	Hawpatch St: from S Townline Road to W Central Avenue	Fort Wayne	.663	STPBG		Local Funds	CN	\$0.00	\$761,000.00				\$761,000.00	
										Group IV Program	CN	\$3,044,000.00	\$0.00				\$3,044,000.00	
Lagrange	41148 / 1702844	A 01	ST 1010	Pavement Replacement	Hawpatch St: from S Townline Road to W Central Avenue	Fort Wayne	.663	STBG	\$4,240,000.00	Local Funds	PE	\$0.00	\$130,932.00	\$130,932.00				

\*Estimated Costs left to Complete Project column is for costs that may extend beyond the four years of a STIP. This column is not fiscally constrained and is for information purposes.

# **APPENDIX I: Additional Studies**

Land and Water Conservation Fund (LWCF) County Property List for Indiana  
 (Last Updated December 2019)

ProjectNumber	SubProjectCode	County	Property
1800221	1800221	LaGrange	Olin Lake Nature Preserve
1800346	1800346	LaGrange	LaGrange Town Park
1800405	1800405C	LaGrange	Big Long Lake Public Access Site
1800405	1800405R	LaGrange	Olin Lake Nature Preserve
1800458	1800458	LaGrange	Lagrange County Nature Preserve/Nature Center
1800476	1800476	LaGrange	Dallas Lake Park
1800529	1800529	LaGrange	Shipshewana North Park
1800549	1800549	LaGrange	Red Mill County Park
1800556	1800556	LaGrange	Pine Knob Park
1800568	1800568	LaGrange	Pine Knob Park
1800585	1800585	LaGrange	Dallas Lake Park
1800629	1800629	LaGrange	Pine Knob Park
1800328	1800328	Various*	Heritage program
1800594	1800594	Various*	Brown County State Park and Versailles State Park
1800611	1800611	Various*	Whitewater Memorial State Park/Salamonie Reservoir
1800626	1800626	Various*	Brown County S.P., Indiana Dunes S.P. and Cataract Falls SRA

Retrieved from the INDOT Environmental Policy website (<https://www.in.gov/indot/2523.htm>) on May 4, 2020.

**ABBREVIATED ENGINEER'S ASSESSMENT**  
**Road Project**

Date: March 7, 2019

Route: SR 5

Des. No.: 1700179

County: LaGrange

Federal Oversight: None

**Location and Project Description**

Located in LaGrange County, improvements are planned for SR 5 from US 20 (RP 91.17) to School Street (RP 92.40) in Shipshewana, Indiana. SR 5 is classified as a major collector and consists of one 11-foot through lane and one 10-foot shoulder that also serves as buggy lane in each direction. A pavement section that includes a two-way left turn lane is located from E. Farver St. to approximately 1,300' to the south of E. Farver St. This segment of SR 5 is not on the National Highway System.

This project includes a preventative maintenance overlay of the existing pavement while widening the roadway to accommodate a two-way left turn lane along the 1.44-mile corridor. The proposed pavement section consists of one 14-foot two-way left turn lane, two 11-foot through lanes, and two 10-foot buggy lanes. Curb and gutter will be added along both sides of the roadway with a graded shelf to the right-of-way line to accommodate future sidewalk construction. A project location map is attached at the end of this report.

**Need for Improvement**

This segment of SR 5 accommodates large buggy volumes alongside the through lane for vehicles. There are many commercial driveways along this heavily traveled corridor. When vehicles are waiting to turn left along this corridor, vehicles enter the buggy lane to bypass the turning vehicle. This action creates conflict points along the corridor as evidenced by the crash history. Queues also develop because of the left turning vehicles which results in rear end collisions. The purpose of the project is to ease the roadway congestion by providing a bi-directional left turn lane. Reducing the queuing will also reduce crash rates.

**Crash History**

Crash data was collected along this segment from January 2015 through December 2017. Crashes over this three-year period are summarized in the following tables.

SR 5 at CR 200 N Intersection								
Year	Crash Severity			Crash Type				
	Fatal/Incap.	Injury	PDO	Right Angle	Rear End	Head On	Sideswipe-Same Direction	Sideswipe-Opposite Direction
2015	0	0	3	1	1	1	0	0
2016	0	0	2	0	1	0	0	1
2017	0	0	4	0	2	0	2	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>9</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>1</b>

SR 5 at US 20 Intersection								
Year	Crash Severity			Crash Type				
	Fatal/Incap.	Injury	PDO	Right Angle	Rear End	Head On	Sideswipe-Same Direction	Backing
2015	0	0	4	0	3	0	0	1
2016	0	0	6	3	1	1	1	0
2017	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>1</b>

SR 5 From US 20 to CR 200 N									
Year	Crash Severity			Crash Type					
	Fatal/Incap.	Injury	PDO	Right Angle	Rear End	Head On	Sideswipe-Same Direction	Backing	Ran Off Road
2015	0	1	7	3	4	1	0	0	0
2016	0	0	7	1	3	0	1	1	1
2017	1	0	6	1	3	0	3	0	0
<b>Total</b>	<b>1</b>	<b>1</b>	<b>20</b>	<b>5</b>	<b>10</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>1</b>

SR 5 From CR 200 N to School Street								
Year	Crash Severity			Crash Type				
	Fatal/Incap.	Injury	PDO	Right Angle	Rear End	Object	Sideswipe-Same Direction	Backing
2015	1	0	10	5	5	1	0	0
2016	0	0	3	0	2	0	0	1
2017	1	0	3	2	1	0	1	0
<b>Total</b>	<b>2</b>	<b>0</b>	<b>16</b>	<b>7</b>	<b>8</b>	<b>1</b>	<b>1</b>	<b>1</b>

ICF and ICC Summary		
Segment/Intersection	ICF	ICC
SR 5 at CR 200 N Intersection	0.76	-0.37
SR 5 at US 20 Intersection	-0.66	-0.90
SR 5 From US 20 to CR 200 N	1.90	0.82
SR 5 From CR 200 N to School Street	2.97	1.45

A RoadHAT analysis was completed using the crash information from the four intersections/segments. SR 5 from US 20 to CR 200 N is found to be a high-crash segment with an Index of Crash Frequency (ICF) of 1.90. The results also show SR 5 from CR 200 N to School Street to be a high-crash segment with in an Index of Crash Frequency (ICF) of 2.97 and an Index of Crash Cost (ICC) of 1.45. The RoadHAT reports are attached to this document.

**Studies and Considerations**

Red Flag Investigation: Pending  
Wetlands/Waters Determination: Pending

**Traffic Data**

The following data was obtained from the Traffic Count Database System. INDOT Traffic Statistics Section will provide updated traffic count data and projections during the design phase.

AADT (2017)	8,561 VPD
Comm. Veh. (2017)	23% AADT
AADT (2039)	11,130 VPD
DHV (2039)	937 VPH
Directional Distribution	50% NB
Growth Rate Used	1.2% per year

**No-Build Alternative**

In the event no action is taken, above average crash rates are expected to continue to rise throughout this segment. The congestion will also get worse if no improvements are made.

**Preferred Alternative**

The existing pavement structure will undergo a mill and overlay with HMA and the pavement will be widened to accommodate a two-way left turn lane. In addition, curb and gutter, storm sewer, and a graded shelf for the future construction of sidewalk will be constructed. This alternative meets the project's purpose and need.

**Design Data**

	<u>SR 5</u>
Project Design Criteria:	3R (Non-Freeway)
Functional Classification:	Major Collector
Terrain:	Level
Design Speed:	40 mph
Posted Speed:	Varies 30-40 mph
Access Control:	None
Number of Lanes and Width:	1 @ 14', 2 @ 11', 2 @ 10'
Shoulders Width and Type:	Curb and Gutter
Maximum Right-of-Way Width:	80' (ex.)

**Crash Forecast**

The addition of a two-way left turn lane is anticipated to have a crash reduction factor of 38.7% for rear end crashes with a 20.3% crash reduction factor for all crash types. With 44% of crashes along this segment classified as rear end, the construction of a two-way left turn lane is expected to be effective at reducing crashes. The above crash reduction factors were obtained from the Crash Modification Factor Clearinghouse and are attached to this document.

**Estimated Costs**

	<u>Year: 2019</u>
Preliminary Engineering:	\$ 420,000
Utility Coordination:	\$ 25,000
Construction:	\$ 3,490,359
Utility Relocation:	\$ 200,000
<u>Right-of-Way:</u>	<u>\$ 25,000</u>
Total Cost:	\$ 4,160,359

**Maintenance of Traffic During Construction**

During construction, maintenance of traffic will likely consist of merging the motorized vehicle lane with the buggy lane for each direction. The contractor will be responsible for following standards as detailed in the Indiana Department of Transportation Standard Drawings and the Indiana Manual on Uniform Traffic Control Devices (IMUTCD).

There are other projects planned for construction in the area that will need to be coordinated with during the design phase to make sure that their construction activities and detour routes are not in conflict. The listing of nearby projects appears in the table on the following page.

LIST OF NEARBY PROJECTS	
DES. NO.	PROJECT DESCRIPTION
1383672	SR 5 over Page Ditch Small Structure Replacement
1383492	SR 5 HMA Overlay north of Shiphewana
1600420	US 20 over Rowe-Eden Ditch Bridge Replacement
1600421	US 20 over Little Elkhart River Bridge Replacement
1700092	US 20 at CR 600 W (LaGrange County) Intersection Improvement
N/A	Sidewalk construction along SR 5 from US 20 to Berkshire (local project)
N/A	Improvements along Middlebury Street (local project)

### **Potential Drainage Locations**

Potential outlet locations for the storm sewer outfall include Cotton Lake Ditch (Sta. 716+00), existing ditches near Sta. 748+00 and Sta. 772+00, and an existing catch basin located near Sta. 782+00. Additional survey will be required to verify existing ditch and catch basin elevations and to determine the exact location of outfalls. Based on the preliminary review of the project area, it appears that ditch regrading or sumping of the storm sewer outlet pipe may be necessary to provide minimum cover and maintain minimum storm sewer slope at some outfall locations.

### **Environmental Impacts**

A Red Flag Investigation and a wetland delineation/Waters Determination are currently being performed. There are no significant environmental impacts anticipated from this project. Development of an environmental document (Categorical Exclusion, Level 1) will be conducted during the design phase. All provisions stated in the CE document will be adhered to.

### **Permits Required**

A Level 1 Storm Water Quality Manager is anticipated. Permits such as IDEM Rule 5, IDEM 401, and USACE 404 will likely be required, and will be determined during the environmental documentation phase.

### **Description of Right-of-Way**

Limited right-of-way is anticipated to be purchased to provide for a uniform 80' width.

### **Parking Impacts**

Limited parking impacts are anticipated at the northeast corner of SR 5/Davis Street. A portion of the parking lot is within the right-of-way for SR 5.

**Railroad Impacts**

Railroad impacts are not anticipated.

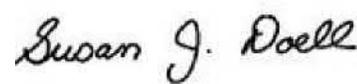
**Utility Impacts**

Utilities along the corridor are expected to be impacted. Utility poles for overhead lines may need to be relocated as the pavement width is increasing. Underground utilities, based upon existing utility maps, run the length of the project and may conflict with proposed storm sewer. The Town of Shipshewana's water main runs along the east side of SR 5 from Berkshire Drive to School Street. The town also has sanitary sewer (both gravity and forced) that runs along the east side of SR 5 from US 20 to the Blue Gate Garden Inn, and the along the west side from the Blue Gate Garden Inn to School Street. A NIPSCO Gas main is also located within the project, along the west side of SR 5. All underground utilities shall be verified to avoid conflict.

**Changes to this Engineer's Report**

The Fort Wayne District Technical Services and Capital Program Management shall be consulted if deviation from the proposal is determined to be necessary during a later phase of project development. The person initiating the changes shall route a memo detailing the changes including justification for the change and the estimated cost difference to the Fort Wayne District System Assessment Manager, Scoping Manager and Project Manager for concurrence.

Prepared by:  March 7, 2019  
Marc Rape, P.E. Date  
Strand Associates, Inc.

Concur:  3/25/19  
Susan Doell, P.E. Date  
Technical Services Scoping Manager

 2019.04.23 08:32:52 -04'00'  
Randall P. Post, P.E. Date  
System Asset Manager

 3/27/19  
Steve Seculoff Date  
Project Manager